

GRAIN & FEED JOURNALS CONSOLIDATED

A Merger of Grain Dealers Journal, American Elevator & Grain Trade, Grain World and Price Current-Grain Reporter



Directory of the Grain Trade

In Organized Markets Only Members of the Local Grain Exchange Will Be Listed

HAVING YOUR name in this directory will introduce you to many old and new firms during the year, whom you do not know or could not meet in any other way. Many new concerns are looking for connections, seeking an outlet or an inlet, possibly in your territory. It is certain that they turn to this recognized Directory, and act upon the suggestions it gives them. The cost is only \$10 per year.

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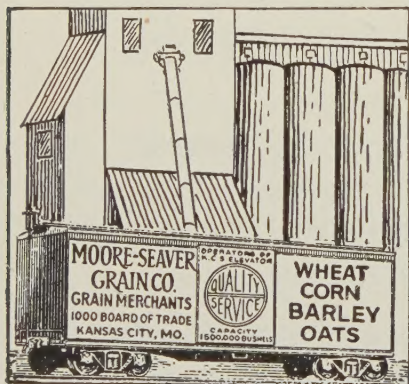
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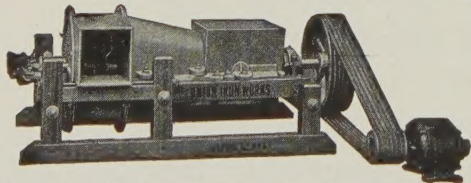
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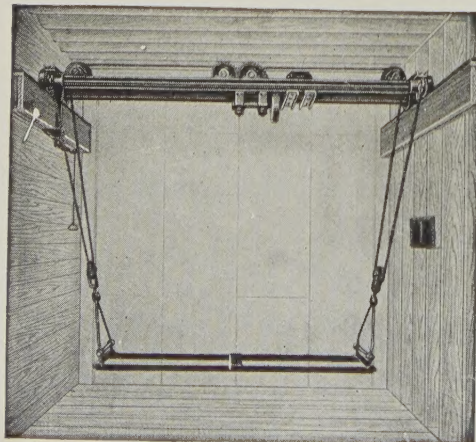
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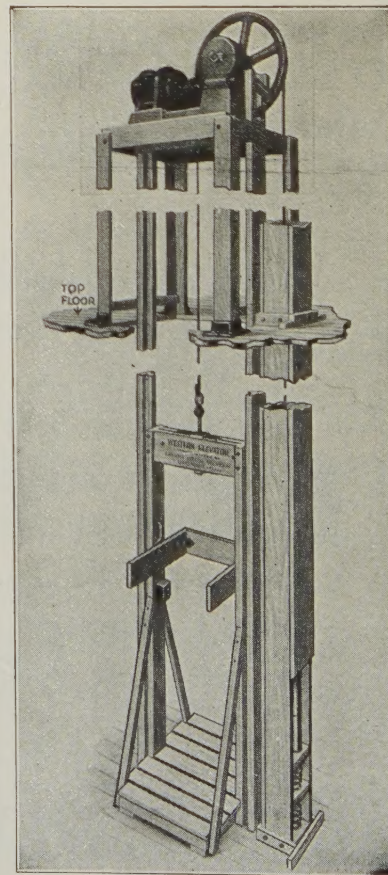


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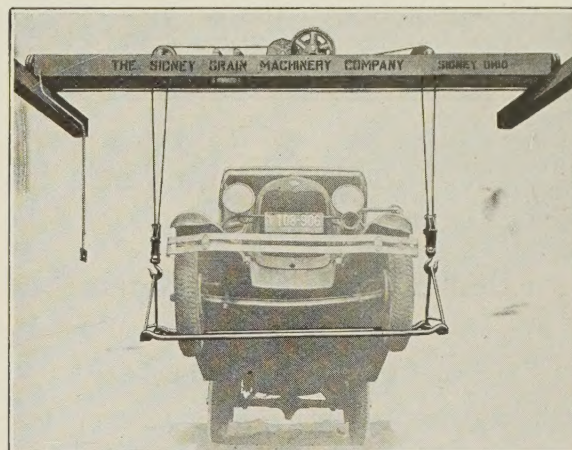
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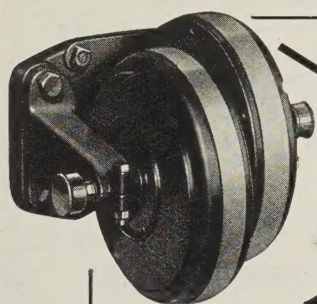
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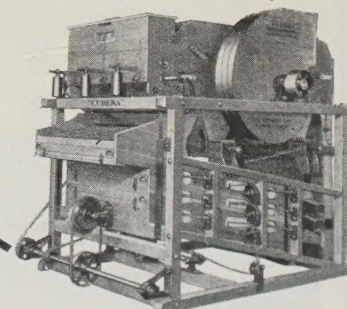
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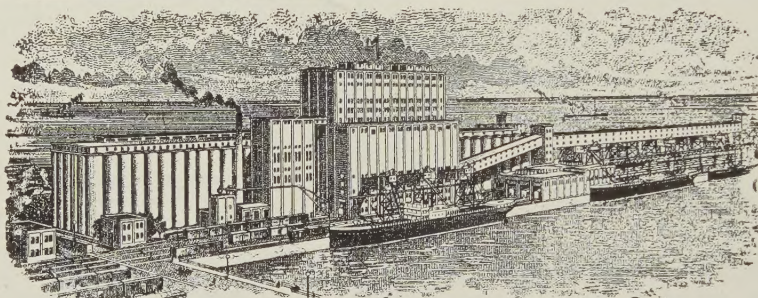
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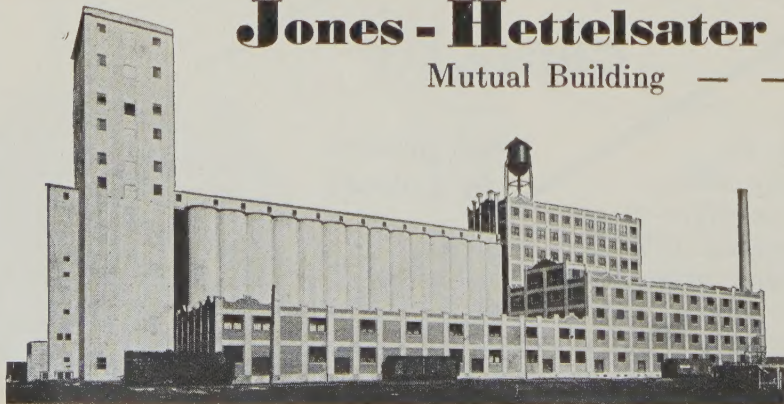
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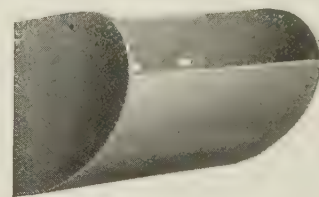
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MINNEAPOLIS MINNESOTA

To BUY or SELL RENT or LEASE an ELEVATOR

Place an adv. in the "Wanted" or "For Sale" columns of the GRAIN & FEED JOURNALS, of Chicago. It will bring you quick returns.

Grain & Feed Journals Consolidated

The paper the Grain and Feed Dealer supports, because it supports the Grain and Feed Dealer.



Concrete Costs No More

Let us prove it.
Plans and estimates
on your needs made
cheerfully.

CHALMERS & BORTON

Designers & Builders
28 E. 1ST ST. HUTCHINSON, KAN.

Think that times are getting back to normal and that we can all make some money.—J. S. Foster, mgr. Farmers Co-op. Elevtr. Co., Firesteel, S. D.

**NO WISE MAN
INVESTS WITHOUT FIRST INVESTIGATING**

SOWEIGH SCALES

SUPERIOR SCALE CO. - DELAVAN, ILL.

Wanted and For Sale

The rate for advertisements in this department is 25 cents per type line each insertion

ELEVATORS FOR SALE

ILLINOIS—14,000 bus. elevator for rent, east central part of state; good territory, good crops. J. Kemp Carson, Clarence, Ill.

IND.—14,000 bu. cribbed, on C&O R.R.; shipped 50M corn, 30M wheat last 12 months; good side lines; owners have other interests. Address 76Y5, Grain & Feed Journals, Chicago.

IOWA—Elevator and feed business; equipped for grinding and mixing commercial feeds and flour. Old established. Will stand closest investigation. W. K. Brewer, 211 Crocker Bldg., Des Moines, Ia.

MINNESOTA—125,000 bus. iron clad frame cleaning and transfer elevator for sale, electric power, fast handling, good cleaner equipment, Northwestern road, a good transit point, and in good barley territory. Real bargain price. Banner Grain Co., Minneapolis, Minn.

ARKANSAS—Small grain elevator, capacity 10,000 bushels; one story warehouse, 60 by 150 ft. one large hay warehouse. All located on Frisco tracks, in the best town in Arkansas. An ideal distributing point for some large flour mill. If interested, write Southern Grain & Produce Co., W. W. Duckett, Mgr., Hope, Arkansas.

CENTRAL ILLINOIS—125,000 bu. modern cribbed and frame, iron-clad elevator on two railroads in the heart of the Corn Belt. Large production of soybeans and elevator is suitably located and constructed that it could be made into a soybean mill. Has shown a consistent profit. A 500,000 bu. per annum station. Address 76N1, Grain & Feed Journals, Chicago, Ill.

SOUTHWESTERN OHIO.—Administrator's sale of grain elevator, about 15,000 bushel capacity, with fine coal business and general store. Sale, Wednesday, December 30, 1936, at two o'clock P. M., on premises 2½ miles northwest of Arcanum, Darke County, Ohio. Appraised at \$7,000.00, can sell for two-thirds. Terms 5% cash. Balance in 90 days. Splendid location, railroad facilities, rich farming district. For further information address, Merle Snell, R. R. No. 2, Tippicanoe City, Ohio.

HELP WANTED

WANTED—Capable, experienced manager for elevator. Will allow part interest. Address 76Z9, Grain & Feed Journals, Chicago, Ill.

WANTED—Salesmen to handle best line of farm salt to elevators and stores on commission basis. For particulars, write Box 328, Saginaw, Mich.

WANTED—Machinery salesmen, familiar with the grain and seed industries; to sell new type seed recleaning machinery. Good commission and exclusive territories to competent men. 76Q12, Grain & Feed Journals, Chicago.

SITUATION WANTED

POSITION WANTED as manager, several years' experience; am now employed, desire change; references. Write 76Y6, Grain & Feed Journals, Chicago, Ill.

POSITION WANTED as manager of grain elevator; 10 years' experience in grain business, 5 years as manager; now employed as manager, but have good reasons for wanting to make a change; 29 yrs. of age; can give good references. Write, 76Z1, Grain & Feed Journals, Chicago, Ill.

COMPETENT AND EXPERIENCED elevator managers, foremen, bookkeepers, auditors, second men and solicitors can easily and quickly be found through an ad in the "Help Wanted" column of the Grain and Feed Journals, Consolidated, Chicago, Ill.

SAMPLE ENVELOPES

SAMPLE ENVELOPES—SPEAR SAFETY—for mailing samples of grain, feed and seed. Made of heavy kraft paper, strong and durable; size 4½x7 inches. Have limited supply to sell at \$2.35 per hundred, or 500, \$10.00 plus postage. Sample mailed on request. Grain & Feed Journals, 332 S. La Salle St., Chicago, Ill.

BUSINESS OPPORTUNITIES

ELEVATOR AND FEED PLANT FOR SALE—Cleveland, Ohio, on NYC R. R., modern concrete house; complete mixing and grinding equipment; a bargain.
Grain Storage, Inc.
2520 Market Avenue Cleveland, Ohio

Improved Duplicating Grain Tickets

Use of Form 19GT as a scale book saves much time and labor as one writing with the use of carbon gives a complete record and at the same time, a ticket for the hauler.

Each of the 125 original leaves bears four scale tickets, is machine perforated, printed on white bond, size of tickets 3x6½ inches. The 125 duplicates are printed on manila, but not perforated. Check bound at top of tickets with hinge top cover, 500 tickets in each book arranged horizontally. Each book 7½x12 inches. 250 leaves with 5 sheets of carbon.

Each ticket has spaces for following record: "Owner, Hauler, Grain, Grade and Dockage, Gross, Tare, Net, Total Dockage, Net Pounds, Bushels, Price and Amount, Storage Ticket No., Station Ticket No., and Date, Weigher, Name of Firm or Buyer." Order Form 19GT Duplicating. Price \$1.20 plus postage.

Triplicating is the same form as 19GT described above with 125 sheets strong white tissue for buyer, bound in between the original tickets for hauler and the duplicate for headquarters so as to make three copies with one writing. Five sheets dual faced carbon, 375 leaves, weight 3 lbs. Order 19GT Trip. Price \$1.65 plus postage.

GRAIN & FEED JOURNALS

Consolidated

332 So. La Salle St.

Chicago, Ill.

A Christmas Present for Your Business

that will assist it to avoid the snares and pitfalls of new trade highways. Send it the convictions, suggestions and experiences of your brother grain dealers twice each month by subscribing to

Grain & Feed Journals Consolidated

332 So. La Salle St., Chicago, Ill.

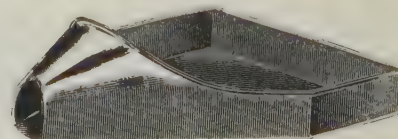
Gentlemen:—In order that I may profit by the experience of others in the grain trade, please send me the Grain & Feed Journals Consolidated twice each month. Enclosed find Two Dollars to pay for one year.

Name of Firm.....

Capacity of Elevator..... Post Office.....

.....bus. State.....

SAMPLE PANS



Formed by bending sheet aluminum, reinforced around top edge with copper wire. Strong, light, durable. The dull, non-reflecting surface of aluminum will not rust or tarnish; assists users to judge of the color and to detect impurities.

Grain Size, 2½x12x16½", \$2.00; Seed Size, 1½x9x11", \$1.65, at Chicago.

GRAIN & FEED JOURNALS

Consolidated

332 So. La Salle St., Chicago, Ill.

MACHINES FOR SALE

CORN CUTTER & Grader—has motor—used very little. 76D6 Grain & Feed Jnrls., Chicago.

HAMMER MILL with 25-h.p. motor and all attachments. Priced to sell. Write 76D7 Grain & Feed Journals, Chicago, Ill.

FEED MIXER for sale, has motor, and a late machine. Need space. Will sacrifice. Write 76D5 Grain & Feed Journals, Chicago, Ill.

FEED MIXER—one ton—floor level feed—has motor—good as new. Write 76D8 Grain & Feed Journals, Chicago, Ill.

CORN SHELLERS; 15 hp motor; 10 hp type Z Fairbanks engine; 5"x10" bucket elevator; 4 bu. automatic scale; 500 bu. hopper scale. Truck dump. P. O. Box 212, Reynolds, Ind.

FOR SALE—Second hand feed and elevator machinery; Tag-Heppenstall Moisture Meters; Bolinder Diesel Engines, Weaver Sales Corp., Corn Exchange, Minneapolis, Minn.

VERTICAL MIXER bargains, priced delivered; also re-built motor bargains, guaranteed same as new. Address Midwest, 728 E. Delaware, Kansas City, Mo.

FOR SALE

30 hp Papec Mill complete with motor
No. 4 Monitor Receiving Separator
No. 122 Standard Seed Cleaner
50 hp Type Y, F-M Engine
26" Bauer Attrition mill with 2, 25 hp motors
½ ton Vertical Feed Mixer
½ ton Horizontal Feed Mixer
Send for complete list of rebuilt machinery.
Sidney Grain Machinery Co.
Sidney, Ohio

MOTORS—GENERATORS**SAVE on MOTORS and GENERATORS**

Write for new Free Catalog of guaranteed re-built Motors, Generators, Pumps, Compressors, etc. We Save you Half. Your Idle equipment taken in trade. Specials in totally enclosed motors, as well as other Bargains.
Chicago Electric Co., 1331 W. 22d St., Chicago.

ELECTRICAL MACHINERY

Large stock of motors and generators, A.C. and D.C., new and rebuilt, at attractive prices. Special bargains in hammermill motors, 25 to 100 H.P., 1200 to 3600 R.P.M. Write for stock list and prices. Expert repair service.
V. M. NUSSBAUM & CO., Fort Wayne, Indiana.

BARGAIN IF TAKEN AT ONCE—Some one is always looking for an elevator at a good grain point and reads these ads just like you're doing now, so if you wish to dispose of your present property, enlarge your present interests, or embark in the grain business, USE these columns to your best advantage just as others are doing. WE WILL assist you in the composition of copy free. We are in business to be of service to YOU. There is no wrong time to put an ad in the columns of the Journal. TRY IT.

SCALES FOR SALE

SELL YOUR SECOND HAND Machines Now—tomorrow they will not be worth as much as they are today. A shiny machine which has just been in operation sells quicker and brings a bigger price than a dirty, rusty one.

SEEDS FOR SALE

SEED OATS that grow and win favor with those who plant them. Rice Grain Co., Metamora, Ohio.

FOLGUM SEED OATS, 7,500 bu. choice 36 to 38 lb. test weight, all from certified seed. Wy-more & Son, Liberty, Mo.

ENGINES FOR SALE**DIESEL FOR SALE**

Number of F-M 25 h.p. new.
2 160 h.p. Atlas Imperial, new.
Other makes and sizes, new and used, prices to sell; terms when needed.

American Power Equipment Co.
Woolworth Bldg., Oil City, Pa.

WANTED—Grain Dealers who are contemplating installing new machinery to use the "Machines Wanted" columns of GRAIN & FEED JOURNALS in securing prices and estimate of machines for sale. We can save you money. More than value received.

MACHINES WANTED

WE ARE IN NEED of one 4,000 to 5,000 or two 2,000 bu. capacity direct heat grain driers; also one 80 to 110 and one 200 to 250 HP natural gas engines; two automatic elevator scales; one receiving separator; three elevator conveyors and some other machinery that may be needed to build new elevators. Miracle Feed Mill, Bishop, Texas.

THE WANTED-FOR SALE DEPARTMENT of GRAIN & FEED JOURNALS is a market place where buyer and seller, employer and employee, and those offering investments can meet to their mutual advantage and profit and it will pay every subscriber to give these columns a close study twice each month, because of the constantly changing variety of opportunities seeking your consideration.

ADDRESS WANTED

J. G. DAVIDSON'S address wanted. Formerly a draftsman for Chicago builders of grain elevators. 76Z6, Grain & Feed Journals, Chicago, Ill.

RAT EXTERMINATOR

RAT LUNCHES—Kills rats and mice without poison. Ready to use. Just lay them out. Endorsed by agricultural authorities. \$1 large package—\$3.50 a carton prepaid. Salesmen-Distributors wanted. Rat Lunches Co., Carroll, Ia.

Grain Receiving Books

Grain Receiving Register for recording loads of grain received from farmers. It contains 200 pages of ledger paper 8½x13½ inches, capacity for 8,200 loads. Some enter loads as received, others assign a page to each farmer, while others assign sections to different grains. Bound in strong board covers, canvas back. Headings of columns are: "Date, Name, Kind of Grain, Gross, Tare, Net, Bushels, Pounds, Price, Amount, Remarks." Weight, 2½ lbs. Order Form 12AA. Price \$2.50, plus postage.

Wagon Loads Received has columns headed: "Month, Day, Name, Kind, Gross and Tare, Net Pounds, Bushels, Pounds, Price, Dollars and Cents, Remarks." Contains 200 pages of ledger paper size 9½x12 inches, providing spaces for 4,000 loads. Bound in heavy boards with strong cloth covers and keratol corners and back. Weight, 2 lbs. Order Form 380. Price \$2.50, plus postage.

Receiving and Stock Book is arranged to keep each kind of grain in separate column so each day's receipts may be easily totaled. It contains 200 pages linen ledger paper size 9½x12 inches, ruled for records of 4,000 loads. Well bound in black cloth and keratol back and corners. Shipping weight, 2½ lbs. Order Form 321. Price \$2.50, plus postage.

Grain Receiving Ledger has 200 pages linen ledger paper and 28-page index, 8½x13½ inches, numbered and ruled for 44 entries. Well bound in pebble cloth with keratol back and corners. Weight, 3 lbs. Order Form 43. Price, \$3.00, plus postage.

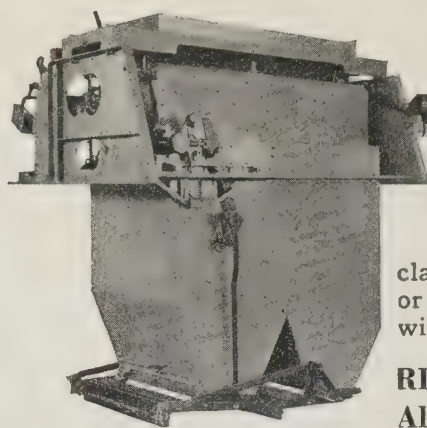
Form 43 XX contains 428 pages. Shipping weight 4½ lbs. Price \$5.00, plus postage.

Grain Scale Book is designed to assign separate pages to each farmer and their names can be indexed so their accounts can be quickly located. It contains 252 numbered pages and 28-page index, of high grade linen ledger paper 10½x15½ inches. Each page will accommodate 41 wagonloads. Well bound with heavy board covers with cloth sides and keratol back and corners. Weight, 4½ lbs. Order Form 23. Price, \$4.00, plus postage.

Grain & Feed Journals
CONSOLIDATED
332 South La Salle St., Chicago, Ill.

GRAIN SHIPPERS!

**WATCH YOUR PRICES!
WATCH YOUR WEIGHTS!**



Both are equally important — Don't rely on obsolete, worn-out scales.

Have them put in first-class condition, or replace them with the modern

RICHARDSON
All - Automatic

Grain Shipping Scale

ACCURATE and SPEEDY

Richardson Scale Company

Factory: Clifton, N. J.

37 W. Van Buren St., Chicago, Illinois

Minneapolis, Minn.

Wichita, Kansas

PEORIA

Located in the very center of Illinois' great corn producing territory, Peoria has three of the largest corn consuming industries, and is the distilling center of the United States. This market also has favorable freight rates to the Gulf and Southeastern territory, which give the Peoria grain merchants unlimited facilities for grain distribution.

So great is the demand, that Iowa and Missouri find their best market here at times and large quantities of corn move to this great Gateway from these states. Owing to the comparatively short haul to Peoria, railroads move this Peoria grain in much shorter time than to other terminals, insuring quicker returns.

*These Peoria Board of Trade Members
Want to Serve You*

Allied Mills, Inc.

James E. Bennett & Co.

Geo. W. Cole Grain Co.

W. W. Dewey & Sons

C. H. Feltman Grain Co.

Lowell Hoit & Co.

Lamson Bros. & Co.

Luke Grain Co.

P. B. & C. C. Miles

Mueller Grain Co.

J. H. Dole & Company

Hiram Walker & Sons Grain Corp.

GRAIN & FEED JOURNALS

CONSOLIDATED

INCORPORATED

332 S. La Salle St., Chicago, Ill., U.S.A.

Charles S. Clark, Manager

A merger of

GRAIN DEALERS JOURNAL
Established 1898

AMERICAN ELEVATOR &
GRAIN TRADE
Established 1882

THE GRAIN WORLD
Established 1928

PRICE CURRENT—GRAIN REPORTER
Established 1844

Published on the second and fourth Wednesdays of each month in the interests of better business methods for progressive wholesale dealers in grain, feed and field seeds. It is the champion of improved mechanical equipment for facilitating and expediting the handling, grinding and improvement of grain, feeds and seeds.

SUBSCRIPTION RATES to United States, Canada and countries within the 8th Postal Zone, semi-monthly, one year, cash with order, \$2.00; single copy current issue, 25c.

To Foreign Countries, prepaid, one year, \$3.00.

THE ADVERTISING value of the Grain & Feed Journals Consolidated as a medium for reaching progressive grain, feed and field seed dealers and elevator operators is unquestioned.

Advertisements of meritorious grain elevator and feed grinding machinery and of responsible firms who seek to serve grain, feed and field seed dealers are solicited. We will not knowingly permit our pages to be used by irresponsible firms for advertising a fake or a swindle.

LETTERS on subjects of interest to those engaged in the grain, feed and field seed trades, news items, reports on crops, grain movements, new grain firms, new grain elevators, contemplated improvements, grain receipts, shipments, and cars leaking grain in transit, are always welcome. Let us hear from you.

QUERIES for grain trade information not found in the Journal are invited. The service is free.

WHEN ESTABLISHED GRAIN elevator operators join their local merchants in the establishment of trucking service for farmer patrons, the nomadic trucker merchant of unknown address and unknown responsibility will cease to impose upon unsuspecting farmers who have grain to sell.

MORE POWER is asked by the Federal Trade Commission, to relieve it of the necessity of proving a defendant had injured a competitor; but the benefits of the Commission's activities have been so negligible it seems hardly worth while to make it easier to force a defendant into court. The duties of the Commission already are sufficiently enlarged in the Robinson-Patman Act.

THE WHEAT SITUATION is to be the title of a new series of monthly commodity reports released by the Bureau of Agricultural Economics. Some of the factual data are credited to Broomhall, to the Tariff Commission and to the Berlin and Paris offices of the Bureau, but the opinions forecasting the price of wheat in the first issue have no name attached so the reader is left in the dark in determining the batting average of the individual responsible. When the government attaches the names of the members of the crop reporting board, where no individual judgment is exercised, to the monthly crop reports it would seem even more desirable to attach the names to the price guesses. Altho put out with official authority it will be difficult to convince anyone that the forecasts are worth more than those of private agencies, of which suffice it to say that out of 4,000 forecasts made in 24 publications during a four-year period only one-third met with any success.

GRAIN MEN will be glad to have the Secretary of Agriculture's desired transition of farm tenants into farm owners become effective as soon as possible. An owner is a better credit risk for side line sales and for crop contracts. He can be trusted for seed. The Resettlement Administration already has bought farms for 1,000 tenants; but we fear a halt must be called, since the Secretary estimates that 230 years of annual appropriations of \$50,000,000 each would be required to wipe out present tenancy. This would also wipe out the taxpayers. Why not let the farmers pay for the farms out of their earnings? According to the National Industrial Conference Board the profits of the farmers on the average are 9 per cent on their investment, excluding dwellings. The value of farms operated by owners was \$9,129,328,000 in 1900 and had increased to \$21,123,468,000 in 1930. The government statistics on farm mortgages are misleading. The emergency appropriation by the last Congress was sufficient to have paid off all the mortgages on all the farms in the country.

APPROVED FUSES are so cheap that no elevator owner can afford to deceive himself with the idea that he is saving a few pennies through the purchase of unapproved, unreliable fuses. The dependable fuse protects his machinery from overloads. The cheap substitutes do not.

FEED MILL OPERATORS who have suffered loss of mill through farmers' carelessness in leaving scrap iron in grain delivered for grinding, do not hesitate to post signs in driveways and office warning patrons of the danger of feeding iron to mill and their liability for damage to machinery. Farmers' tramp iron has wrecked so many mills the record proves conclusively that few farmers appreciate the damage likely to result from their delivering a mixture of iron and grain for grinding. So, everyone would be benefited by warnings posted at every turn on the grinding floor.

DEPRIVING railroads of needed revenue when materials and operating costs are rising, by the recent denial of continued emergency rates, might be fair if early action could be taken on the proposed revised basic rate structure. To act on this proposal will take a year, and the carriers should have had a stop gap. They never have had the percentage of earnings contemplated by the law. The Interstate Commerce Commission's denial of the surcharges should have the effect of expediting a decision on the basic rate structure suggested by the carriers to give them additional revenue.

CALCIUM CHLORIDE IS the least expensive and the most practical protection against freezing when mixed in the proper proportions with the contents of your water barrels. The elevator owner who adopts this precaution is not disappointed when he runs to one of his convenient barrels for water to extinguish a small blaze. The records of mutual companies insuring grain elevators and flour mills credit water barrels with the extinguishment of more fires than any other apparatus provided for such protection. Calcium Chloride dissolves readily in hot water and then can be mixed with cold water and provide the cheapest, most dependable fire extinguisher obtainable.

The Highest and Happiest Christmas to You

THE JOURNAL would wish you the great invisible things—dear memories on silencing wings, perceptions that only love brings, delights on untethered strings, a true philosophy for living, a rapture in joy-giving, a deepening pleasure in *beholding* beauty, a happy measure of high duty, a revelation of the "halo of light." These be your miracles of Christmas night.—Myrtle Dean Clark.

CHICAGO, ILL., DECEMBER 23, 1936

THE OVERHEATED OFFICE stove has taken its annual destruction of elevator offices and taken along with them several perfectly good grain elevators.

THE ELEVATOR OPERATOR who can figure out accurately his new taxes for the Federal Old Age benefits and Unemployment Insurance without getting an awful headache is the rare exception.

GRINDING SULPHUR with oats is not the safest operation known to feed mills as was discovered recently by an Indiana operator of a hammer mill who found that the reed spout had become red hot.

ACCORDING TO THE Department of Agriculture's own figures, the winter wheat growers have planted over 57,000,000 acres and the crop now has an encouraging condition of 75.8% so it may not be necessary to import many million bushels of wheat next year even though liberal bonuses and benefits are allowed for soil conservation.

BUILDERS of new elevators will profit materially by iron-cladding not only their elevator but all the adjoining and adjacent buildings. Mutual fire insurance companies in underwriting elevator risks allow such a liberal credit for this protection that the saving in fire insurance cost will pay for the iron-cladding in a few years and thereafter this protection against fire earns a liberal return on the investment each year.

WHILE A NUMBER of thieves and burglars have broken into grain offices recently, the Farmer's Elevator at Nekoma, Ill., has experienced robbery of a new variety. Its offices were visited by bandits in the middle of the afternoon and \$206 in cash carried away. If large amounts of cash are kept in one place, the robbers can be depended upon to call for it both by day and night. Hiding surplus funds in secret depositories has reduced many losses.

THE REPORT OF an elevator manager at Kasbeer, Ill., this number reflects the pride and satisfaction the elevator operator realizes from protecting his plant from the old-style power consuming friction fire producers which should have been discarded years ago. The power saving effected through the installation of roller or ball-bearings has encouraged many farsighted elevator operators to install the best obtainable. Not only do these anti-friction bearings reduce the power needed to perform a given amount of work, but they also reduce the friction danger of fire. They reduce the labor and the oil required to lubricate the bearings and keep the plant running without interruption for the replacement of bearings which have been burned out.

Sugar-Coating New N.R.A.

Exemption from liability under the anti-trust laws with the privilege of fixing prices is offered by the drafters of the bill for a new N. R. A., to quiet the opposition to the measure which will regulate wages and hours of labor and contain the definitions of unfair competition similar to those contained in the original national industrial recovery act.

The bills for the new N. R. A. are being pushed by the Council of Industrial Progress, the chairman of which is the President's industrial co-ordinator and which is dominated by organized labor, having the 30-hour week in the background.

No reliance can be placed on the promise in the bills that exemption from the anti-trust laws will be granted, or that prices and margins of profit can be fixed. Most bills contain a clause that the whole measure is not to be invalidated by the courts if only certain sections are unconstitutional. A court decision voiding the exemptions in favor of business would leave the regulating powers in effect.

Do Grain Dealers Take Enough Margin?

Aside from the small department stores, feed, grain and hay dealers, and feed, grain, fuel and lumber concerns show the smallest percentage of profit of any of the classifications reporting in the latest retail survey of general merchandise and farmers supplies conducted by Dun & Bradstreet's research and statistical department. Their percentages are 1.4 and 1.5, respectively.

Similarly it is notable that the gross profit taken by the feed, grain and hay concerns totals only 13.4%, and the gross profit taken by feed, grain, fuel and lumber concerns totals only 15.4%, the lowest percentages of gross profit taken by any group dealing in general merchandise or farmers supplies.

Among all retail classes the grain and feed dealers stand out as classes of tradesmen taking the smallest slice of the consumers' dollar. They must depend upon a volume of business to show anything like a reasonable profit.

This fact alone should be sufficient reason for legislators to let the grain and feed trades alone; they serve efficiently on a margin altogether too small.

A Quack Would Abolish Exchanges

Quackery is based on ignorance of natural laws. Just as the medical quack has no scientific knowledge of medicine so the legislative and business quack rushes ahead with remedies that attack only the symptoms of evils and not the causes. He would use the power of government to produce less that there may be an abundance to divide. He would set a minimum wage that would deprive those unable to earn it of employment.

A quack from Sterling, Ill., speaking Dec. 17 before the Agricultural Club at Chicago topped them all with his co-operative plan for the government to control the sale of all agricultural commodities and thus fix prices on a parity with manufactured goods that the farmer must buy.

One of the chief recommendations of his plan this quack stated, was that it would do away with the necessity for commodity exchanges. This does not square with the facts. Before the Board of Trade began trading in soybean futures the price ruled around 80 to 90 cents. After trading began Oct. 5 the market marched up to \$1.60, just because the future trading on the Exchange introduced an element of competition.

In cotton too, the Board of Trade made Texas the basis of delivery, to the great advantage of Texas cotton planters, growers today receiving an increase of at least \$1.75 per bale on their spot cotton, compared with old conditions.

Farmers have suffered so severely from

governmental interference and regimentation they are about ready to give up, so one more quack experiment may drive them to depend upon their own judgment for the profitable direction of their various activities.

Holiday Merchandising

Ever since the pre-Christmas occasion when we walked into the office of an Indiana elevator to find the outer office filled with farmers and their children, happily munching Christmas candy and shucking peanuts obtained in handsful from two big boxes at one end of the room, we have thought "Candy Day" a fine expression of the Holiday spirit, worthy of practice by more grain and feed dealers.

Candy Day at the Indiana elevator mentioned was a yearly Holiday event, something like dividend day, but without its limitations. The candy and peanuts were free, and in literally limitless quantity.

The Saturday before Christmas was usually selected for Candy Day and farmers drove in from miles around to do their shopping, to visit the elevator, to pick up a sack of feed, or deliver a load of grain, according to their needs—and munch their fill of the free candy and peanuts. Trade was brisk, but trade became something of a secondary nature by the very lavishness with which the candy and peanuts were made available. The candy and peanuts were free whether a farmer did any trading or not.

Of course, the event was well advertised in advance, with advertisements in the weekly newspaper, and mimeographed letters to every possible customer.

In spite of the great display of lighted and bedecked Christmas trees, and numberless wreaths of holly hung in office windows, in spite of the calendars and pretty Christmas cards, few Holiday merchandising plans have impressed us with the simple spirit of Christmas cheer so well as Candy Day. A dozen variations of the plan are workable. It is not necessary that the gifts distributed be costly. Certainly in the case of the Indiana elevator they were not. It is only necessary that the gifts be pleasing to the recipient, and that their distribution be freed from that immediate flavor of commercialism that is so apt to warp the spirit of the occasion.

A farmer called quietly into a private office and given some special present may leave the office thinking about the volume of business he delivered to the elevator; but a farmer eating peanuts out of one hand and candy out of the other, without regard for the business he has brought to the elevator, is likely to dwell upon the generosity of the manager or owner of the business.

Wheat at Higher Levels

The advance in the price of wheat of over 25 cents per bushel comes at a time when the factors usually coincident with rising prices are absent. The wheat plant frozen in the soil, is dormant, and undergoing no sudden unfavorable growing condition. Investment buying of wheat is practically absent, as shown by the decrease in the open interest in wheat futures.

Wheat apparently is participating in a readjustment to higher levels simultaneously with an upward adjustment in the prices of other commodities. On the same day that wheat recorded a new high level copper, lead and zinc reached new high prices since early in 1930. Rubber, cocoa and hides advanced. Cotton at New Orleans is sharply higher.

One factor that affects all these commodities is the monetary situation. The increased amount of per capita money in circulation, and the increase in employment stimulating business activity have in their background the greater factor of devaluation of the dollar. Economists are agreed that dollar devaluation must eventually be followed by a rise in prices, tho none seems to be willing to set a date for the happy event. This gives rise to the question:

WHAT IS THE REAL VALUE OF WHEAT measured in terms of the present devalued dollar?

Rejecting years of depression and years of war, the 16 years from 1877 to 1892, and the 16 years from 1899 to 1914 afford a fair basis for determining the former value of wheat as measured in gold.

The average low price of contract wheat at Chicago during the earlier 16 years was 80 cents and during the 16 years 1899 to 1914 was 76 cents per bushel. The average high price during the earlier period was \$1.21 and in the years 1899 to 1914 was \$1.18 per bushel.

The fact that the average highs for the two periods were only 3 cents apart gives support to the price level theory. Likewise the average lows were close together at 80 and 76 cents.

Averaging the highs for the 32 years we obtain the price of \$1.19½. To convert this price into terms of the present devalued (59.06c) dollar we multiply by 1.6931, the result being \$2.02 per bushel. The same percentage applied to the average 32 years' low of 78 cents gives \$1.22 per bushel.

In other words, under present monetary conditions whenever the price of wheat at Chicago rises above \$2.02 it is too high; and when it falls below \$1.22 it is too low. It is significant in support of this statement that in not one of the 16 years from 1877 to 1892 inclusive did the price of wheat fail to sell above the 80 cent average; and that in not one of the 16 years 1899 to 1914 did the price of wheat fail to sell above the 76 cent average for those years.

Rejecting the 6 years 1929 to 1934 as we did the 6 panic years of 1893-1898 we have a period of 16 years beginning in 1935 and continuing to 1951 during which the price of wheat should not fail, each year, to rise above \$1.22 per bushel.

So far this principle has made good, contract wheat in 1935 having sold at \$1.31, and in 1936 at \$1.40½, both prices well above \$1.22.

The lowest price reached in the 16 years 1899 to 1914 was 61½ in 1900. A corresponding extreme low under present monetary conditions is \$1.04, indicating the point down to which it might be necessary to margin a commitment on the long side of the market during the present cycle of rising prices, which the cycle theorists insist should continue until 1944. As to how high prices might go it seems idle to speculate. However, it may be said that the highest price reached in the later 16-

year period was \$1.60 in June, 1909, equivalent under present monetary conditions to \$2.70 per bushel.

Market letter writers and customer's men are never at a loss to account for a bull market in wheat. At the present time they point to the strong market in Liverpool, the Danube retiring as a seller forcing buyers to look to Argentina, reduced Canadian visible compared with a year ago, depleted stocks of cash wheat, Italy buying full cargoes, Germany about to come into the market for 35,000,000 bus. and the deficient subsoil moisture in the Southwest and Northwest.

Good opinion is that none of these fears of moisture deficiency will be realized, that a very large crop will be grown on the record-breaking winter wheat acreage, and that the farmers will receive more than \$1.04 per bushel for all they can harvest, spelling prosperity next fall for grain handlers and carriers.

VISIBLE SUPPLY OF WHEAT

On or about Dec. 1 each year the visible supply of wheat has been as follows, in bushels:

1936.....	62,459,000	1929.....	184,602,000
1935.....	75,434,000	1928.....	136,777,000
1934.....	92,746,000	1927.....	91,036,000
1933.....	135,744,000	1926.....	72,944,000
1932.....	176,013,000	1925.....	44,780,000
1931.....	221,799,000	1924.....	100,363,000
1930.....	195,562,000	1923.....	71,808,000

With the visible down to 44,780,000 bus. in December, 1925, wheat sold in January, 1926, at \$1.94, equivalent to \$3.29 per bushel on our present gold standard.

Grades Changed by Appeal

Records of the federal grain supervision of the number of appeals to the federal board of review from the grading of grain by licensed inspectors show that during the crop year July 1, 1935, to June 30, 1936, 36,013 appeals were handled, the assigned grade being sustained in 22,578 instances, lowered in 4,577, and raised in 8,858 instances. On 13,403 shipments out of the central markets the grade was sustained in 11,597, lowered in 454 and raised in 1,352 cases.

Wheat, receipts, 11,573 sustained, 2,487 lowered, 4,852 raised. Shipments, 7,432 sustained, 196 lowered, 877 raised.

Corn, receipts, 6,629 sustained, 1,166 lowered, 1,024 raised. Shipments, 1,266 sustained, 100 lowered, 85 raised.

Oats, receipts, 1,928 sustained, 329 lowered, 995 raised. Shipments, 1,449 sustained, 88 lowered, 94 raised.

Rye, receipts, 458 sustained, 113 lowered, 477 raised. Shipments, 967 sustained, 30 lowered, 151 raised.

Barley, receipts, 1,255 sustained, 274 lowered, 617 raised. Shipments, 409 sustained, 35 lowered, 98 raised.

Flaxseed, 620 sustained, 190 lowered, 819 raised. Shipments, 58 sustained, 4 lowered, 47 raised.

Sorghums, receipts, 62 sustained, 16 lowered, 22 raised. Shipments, 15 sustained, 1 lowered, none raised.

Mixed grain, receipts, 53 sustained, 2 lowered, 52 raised. Shipments, 1 sustained, none lowered or raised.

Minneapolis, Minn.—A verdict of \$13,929.72 was awarded the Zinsmaster Baking Co. by Judge Levi M. Hall in the Minnesota state district court, in its complaint against the Commander Milling Co. asking for return of processing taxes. This was the full amount for which the baker sued, and is the first of 13 such suits filed by the Zinsmaster organization against milling companies. The defendant is expected to carry the case to the Minnesota Supreme Court.

New Corn of Better Quality

The quality of the corn crop in the territory tributary to Buffalo is good to excellent. The kernels are plump and well matured. In the beginning of the corn movement due to warm weather and heavy moisture content a number of cars arrived out of condition. This trouble has materially decreased since the advent of cold weather.

Ohio River markets report the current corn crop to have 1.6 pounds more weight per bushel and 3% less moisture than the 1935 crop, the effect being that the corn comes from the drier in better condition.

At Indianapolis in October out of 404 cars received 48 were heating on arrival, but the average moisture was only 19.8 against 22.5% in October, 1935.

Such corn as Omaha is receiving is originating either in northern Iowa or southern Minnesota, with practically none being received from any other locality. Very little damage has been present. Much of the corn is quite dry, grading No. 3.

Considerable new corn is being received by truck this season from points within a radius of 60 or more miles from Nashville. It is practically all in the ear and is keeping local shellers and driers busy. The quality is good.

The poor carrying quality of the corn has been noted at St. Louis. For some unknown reason it will become musty and heating in a very short time, even tho reasonably dry. The moisture content of the new corn crop is 18 to 18.5%, test weight 55 pounds and damage less than 3%.

New crop corn is arriving at Kansas City in good condition and is of much higher quality than last year. The moisture content averages 18%.

All Iowa corn is now grading on moisture, this factor on early arrivals averaging 20.4%. Most of the damage is cob rot.

At Peoria very few cars have been out of condition. Considerable corn has been dried to 14.5%, with very little cracked corn from the drying process.

Country shippers in Ohio report that for some unknown reason the natural corn is extremely dangerous to handle. It appears to heat when held in bins longer than 24 hours. For this reason country shippers will not buy wagon lots unless they are able to purchase enough in one day to fill a car and ship it out immediately.

At Chicago the test weight per bushel is found to be unusually high for high moisture corn, averaging 53 pounds per bushel.

Farm Credit Administration loans during October amounted to \$68,900,000 compared to \$57,300,000 in September and \$78,100,000 in October, 1935. Of the total amount loaned in October just past, \$33,300,000 consisted of short-term credit for farm operations and production, \$23,900,000 of loans to cooperatives, and \$11,700,000 of farm mortgage loans, according to the Dec. 12 report of the F.C.A.

Our Part

Not once in life, perhaps, 'tis ours
To reach a long-sought goal;
But we may pause beside the road
To help another soul.
Not once to us may come the call
To play the hero's part;
But we, perchance, may find some
word
To cheer a saddened heart.

Asked—Answered

[Readers who fail to find trade information desired should send query for free publication here. The experience of your brother dealers is worth consulting. Replies to queries are solicited.]

Old Grain Contract under New Illinois Law?

Grain & Feed Journals: In regard to rules and regulations governing the storage of grain in Class B public warehouses we ask whether the old grain contract could be used as under the N.R.A., as published in the Journals on page 16 of July 8 number.—Richard Talbott, manager Grangers Elevator Co., Manito, Ill.

Ans.: The contract is legal and could be used, notwithstanding the opinion of the attorney-general of Illinois that "I regard the 'deferred shipment' contract as a dodge not only of the letter, but also of the spirit of the law."

Accepting the attorney-general's opinion, Emil C. Davis, supervisor of warehouses of the Illinois Commerce Commission, writes "From this opinion you will note the holding of soybeans or other grain under a deferred shipment contract is considered storage and comes within the law."

Form of Receipt under Illinois Class B Law?

Grain & Feed Journals: What forms of receipts are to be used in connection with the new storage law in Illinois? What form is accepted by the state?—J. A. Simpson, manager Woodford Elevator Co., Minonk, Ill.

Ans.: No exact wording of a receipt has been prescribed by the state. The law requires the receipt to show: name of operator; kind, grade and number of bushels stored; name of depositor; whether receipt is negotiable or not negotiable; date received into store; statement whether insured and to what extent and against what, fire for example; must be consecutively numbered, and may limit the time of storage.

Emil C. Davis, supervisor of warehouses, Springfield, Ill., writes that "Class B warehouses are required to comply with the 'Grain Warehouse Act,' the 'Warehouse Receipt Act,' and the rules and regulations adopted by the Illinois Commerce Commission;

"That a Class B Warehouse licensed under the 'United States Warehouse Act' is not exempt from the provisions of the Illinois law, if any part of the business of such Class B warehouse is the handling of grain in intrastate shipment;

"As to the question relative to warehousing of soy beans for processors, I am firmly of the conclusion that the handling of soy beans or any other grain coming within the provision of Senate Bill No. 15, under such arrangement would be considered storage as contemplated by the Act of 1871, as amended, and such an operator would be required to apply for and obtain a license under such a situation, the same as any other warehouse operator coming under the provisions of said Senate Bill No. 15.

"Grain dealers who are now or have been since July 1, 1936, accepting grain for storage, either from the public at large or from processors, as provided by law, or expect to engage in this business should proceed without further delay to comply with General Order 142, or cease such operation.

"This law was drafted by the grain dealers of the State and passed by the Legislature, at their request, and therefore we anticipate their co-operation in the enforcement of this law."

Kansas City, Mo.—H. L. Bainer, for many years director of the Southwest Wheat Improvement Ass'n, is now associated with the land department of the Santa Fe railroad, as general agricultural agent at Amarillo, Tex.

Altho the Pacific Northwest grain movement has been brought to a standstill by the now (43-day-old strike), wheat growers find themselves in the most prosperous season since the depression. It is estimated that before the strike curtailed shipments growers had disposed of approximately 70 per cent of the crop at the best price experienced in years.—F. K. H.

Suit for Processing Taxes Started

Proceedings have been started in the federal court by the Patent Cereals Co., Geneva, N. Y., to recover \$159,015.27 in processing taxes paid to the government under the Agricultural Adjustment Act.

The legality and constitutionality of the refund section of Title 7 of the Revenue Act of July, 1936, is attacked in the suit. The section providing for the refund of processing taxes only if the processor can prove that he absorbed the tax, the Patent Cereals Co. contends, is illegal and is an unconstitutional scheme on the part of the government to deprive the company of its right to a refund. Congress, the company further declares, has no power to restrict its right to a refund of illegally imposed taxes.

National Ass'n Sets Convention Dates

The Grain & Feed Dealers National Ass'n will hold its 1937 convention on October 11 and 12, announces Pres. S. W. Wilder. The Texas Centennial Exposition will be continued next year and will be in progress at the time of the Grain & Feed Dealers convention.

The Dallas entertainment com'te includes J. R. Brown, chairman; A. J. Biggio and Alva McKnight. The finance com'te includes Jack P. Burrus, chairman; F. E. Cowan, Edwin Doggett, D. S. Donavon and N. L. Kelley.

Federal inspectors will hold a grain grading school in connection with the Dallas convention, and probably will set the date for Sunday, Oct. 10. At least six other national grain and feed organizations are expected to schedule their annual meetings for Dallas at the time of the Grain & Feed Dealers convention.

Coming Conventions

Trade conventions are always worth while, as they afford live, progressive grain dealers a chance to meet other merchants from the same industry. You can not afford to pass up these opportunities to cultivate friendly relations and profit by the experience and study of others.

Jan. 20, 21. Indiana Grain Dealers Ass'n. library of the Indianapolis Board of Trade.

Jan. 26, 27, 28. Farmers Grain Dealers Ass'n of Iowa, Des Moines, Ia.

Feb. 2, 3, 4. Farmers Grain Dealers Ass'n of North Dakota, Grand Forks, N. D.

Feb. 16, 17, 18. Farmers Elevator Ass'n of Minnesota, Minneapolis, Minn.

Feb. 22. Pacific Northwest Feed Ass'n, Seattle, Wash.

Feb. 22, 23. Farmers Grain Dealers Ass'n of Ohio, Toledo, O.

May 10, 11. Illinois Grain Dealers Ass'n, Decatur Ill.

June 1, 2. Pacific States Seedsmen's Ass'n, Santa Barbara, Cal.

June 10, 11. American Feed Manufacturers Ass'n, Homestead Hotel, Hot Springs, Va.

June 21, 22. Ohio Grain, Mill & Feed Dealers Ass'n, Breakers Hotel, Cedar Point, O.

October 11, 12. Grain & Feed Dealers National Ass'n, Dallas, Tex.

Complete Protection for Policy Holders

By J. J. FITZGERALD, Indianapolis

The "Grain Dealers Journal" of August 25, 1896, contained an indignant editorial on the adjustment of a loss on grain in a Chicago terminal. It seems there had been a material drop in price after the fire and the adjusters sought to take advantage of it by replacing the grain. To quote from the "Journal":

"The market price of wheat and flaxseed had declined so rapidly directly after the fire, that replacing the burned grain and seed would have enabled the adjusters to have saved over \$100,000 for their companies if their scheme could have been carried through. It seems contrary to the nature of the average adjuster to pay anything they can avoid paying. What is right or fair is not considered by them; their motto seems ever to be to make salvage for their companies in any way that they can."

That was forty years ago. It was then the practice to restrict the coverage on elevators within the narrowest limits; and the procedure in loss adjustments was all too often borrowed from that of the horse trader. Happily all of this has been changed, largely because of the work of the Mutual companies making a specialty of Mill and Elevator Insurance.

From the beginning the aim of these companies has been to grant the broadest coverage possible, and to resolve all doubts in favor of the insured in settling losses.

In the old days policies were written to cover specific amounts in this fashion—

\$2,500 on Building
\$2,500 on Machinery
\$1,000 on Power
\$250 on Office Equipment

This looks fair enough on its face; but in actual practice it was often found, especially in the case of old elevators, that the amounts were not properly balanced with the result that a fire would find the building over-insured and the machinery under-insured or vice versa. A saving, of course, would rebound to the Insurance Company.

With changing conditions and the development of business came the demand for fuller protection against the hazards to which grain men were subjected and the "Mill Mutuals" were always ahead of the times.

Windstorm Insurance, once a novelty, became a necessary coverage and within recent years has been extended to take in any fire loss following a windstorm and resulting therefrom. This was a much needed reform, as the "fallen building" clause of the fire policy turned the building owner out in the cold and the windstorm policy left him there. He now gets protection under the windstorm policy for such a fire without additional cost.

Explosion is another of these hazards that often created confusion, inasmuch as the fire policy excluded all loss by explosion and covered only such fire loss that might follow. Obviously it was often difficult to determine just where an explosion left off and a fire began.

The Supplemental Contract now being attached to all elevator fire policies covers not only explosions but loss occasioned by riot, as well as aircraft and self-propelled vehicles; and all of these coverages have been added without additional charge.

It seems a long way back to the time when the elevator man after a back-breaking day had to check his grain values against his insurance to be certain that he was not under-insured; but to those of us who were then on the job the recollection is anything but pleasant. The elevator man was often in a state of uncertainty and his insurance company was worked to death during the grain moving season in an endeavor to handle all orders that came in night or day. The premium adjustment policy popularized by the "Mill Mu-

tuals" has made this uncertainty and extra work unnecessary. However, fine as the system is, it is not wholly automatic. There is still a limit of insurance in the policy. And it is the duty of the insured to see to it that his values do not exceed that limit if he wants full protection. But this is a small item compared with the bother of keeping fully insured under the old system.

The Preferred Mill and Elevator Policy—a "Mill Mutual" development—is one of the best advances made in the Casualty field for the benefit of the elevator man. The Liability Policy in effect before the adoption of the "Preferred" was a very limited contract indeed; so limited, in fact, that the operator of an elevator was left in a rather precarious condition because of the many possibilities of accident for which he could be held legally liable. The "Preferred" policy was developed with the idea of providing complete liability coverage under one policy—and it does just that.

Our Mutual companies, although their operations have broadened with the years, are still specialists in the Mill and Elevator field. In fact, no class of policyholders in the United States receives the service that Mutual Mill and Elevator policyholders receive. Whether it be cost, coverage, inspections, lost adjustments, or insurance service of any kind, these policyholders, old or new, are away out in front. "Mill Mutual" service as a matter of fact is recognized as standard in the Insurance world.

Soybean Research Laboratory Established

Establishment of a soybean research laboratory centered at the University of Illinois, Urbana, but of particular interest in a dozen surrounding states, is one of the projects to which Dr. James T. Jardine points with pride in his annual report as chief of the federal office of experiment stations.

Clarence, Ia.—Clover hay brought \$10.50 a ton at the closing out farm sale of Mrs. Ida Sonnemaker on Dec. 5. At the Len Blank farm sale east of Wilton Junction recently clover hay brought \$17 a ton.

Letters from the Trade

[The grain dealers' forum for the discussion of grain trade problems, practices and needed reforms or improvements. When you have anything to say of interest to members of the grain trade, send it to the Journals for publication.]

Grain on Dump Floor Handicaps Operation

Grain & Feed Journals: Elevator operators who use an air dump should keep dump floor clear of grain for efficient operation. We find in many cases that they let from one to eight inches of grain stay on their dump floor practically all the time. Trucks are driven onto the dump, and as it goes up it is almost impossible to pull the rear wheels thru the wheat. This puts a great deal of strain on the dump mechanism. By making the floor reasonably clean the dump would work without any jumping and jerking and would come down much easier and with less friction.—White Star Company, A. C. Rynders, Wichita, Kan.

Store Grain Near the Farms

Grain & Feed Journals: This whole scheme of crop insurance, erosion policy, regimenting farmers so they are limited to the crops they can produce, is vital to the grain trade. If farmers don't raise the grain they won't have it to handle.

Country grain dealers believe that the grain should be stored as near the farms as possible, on the farms when possible. Terminal markets, of course, think it should be shipped to the terminals where they can get a handling charge on the deal both in and out as well as storage.

Improvements of elevators in the central states, and with additional equipment they are fast putting in, they are getting to be more and more wholesale and retail handlers of grain, feed, seed, and commodities of this kind, so their interest is not always identical with the terminal interest, but they should all work together; insist on public hearing on all legislation affecting the grain trade and we are inclined to believe with all the endorsement that the administration has they will be more willing to listen to someone besides the radical group that rode rough shod over everybody the last two years.—P. E. Goodrich, pres. Goodrich Bros. Co., Winchester, Ind.

Ashton, Ill.—Two carloads of pop corn, 160,000 pounds, the crop from 320 acres in this vicinity, were sold by J. M. Bergeon Grain Co. Nov. 28 to a Wall Lake, Ia., buyer. Production of pop corn in this vicinity is increasing.

Geo. S. Clayton Dies

Geo. S. Clayton, a pioneer grain dealer of Colorado, died at his home in Denver, on Dec. 12, after a brief illness. He was 82 years old.

Prominent in the early history of the grain business in Colorado, Mr. Clayton had been associated with the development of both the country and the terminal divisions of the business for more than 45 years.

As head of the Cash Grain Co., Mr. Clayton was a prominent worker in organization of the Colorado Grain Dealers Ass'n in the first decade of this century and served that organization as sec'y. In 1912, when the Denver Grain Exchange was organized, Mr. Clayton served the new Exchange as sec'y. In succeeding years he served both the grain dealers organization and the Exchange in various capacities, being elected president of the latter in March, 1917.

Widely and favorably known thruout Colorado, Wyoming, western Nebraska and other sections, Mr. Clayton's death has saddened the hearts of countless friends.

Owners Liable for Air Compressor Explosions

During the latter part of August a Montana elevator owner was loading a car of wheat. He left the office for a minute to check the scales just as two customers were approaching. Suddenly there was an explosion. The office floor heaved and collapsed in a cloud of dust.

It developed that the truck-dump air-tank located under the office floor had ruptured from excessive pressure. Fortunately the owner and the two customers were not in the office at the time, as otherwise they might have been seriously injured, if indeed they had escaped with their lives.

Suppose the customers had been injured, or suppose a team or truck on the driveway had been damaged. If so, the owner would have been faced with serious liability claims.

The courts hold a man as negligent when he does what a reasonably prudent man would not have done, or if he fails to do what a reasonably prudent man would have done.

A reasonably prudent grain elevator operator will see to it that compressed air equipment on his premises is in good condition. Recently the Lumbermen's Mutual Casualty Co., having in mind a number of persons killed or injured by explosion of air compressors and receivers, has issued the following suggestions as an aid to inspection of such equipment:

1. Equipment should be purchased from a reputable manufacturer or dealer and his recommendations regarding operating procedure should be followed to the letter.

2. It is essential that the compressors should be strongly built, installed on a firm foundation and securely fastened in place. They should be located in a proper enclosure. Be sure the motor is grounded.

3. Each installation should be of such size and capacity that the machine will not develop excessive temperatures while operating. A good point to remember is that if it is not possible to hold your bare hand on the tank comfortably, it is operating at excessive temperature.

4. The lubrication of the compressor should be checked to make sure that it is being maintained properly.

5. The air inlet should be placed at a point where a minimum of dust and dirt will be drawn into the machine. If there is any question on this point, each air inlet connection should be fitted with a strainer.

6. Each air tank should be equipped with a safety valve set to operate at the pressure recommended by the manufacturer of the equipment; the safety valve should be tested frequently by the hand lifting lever.

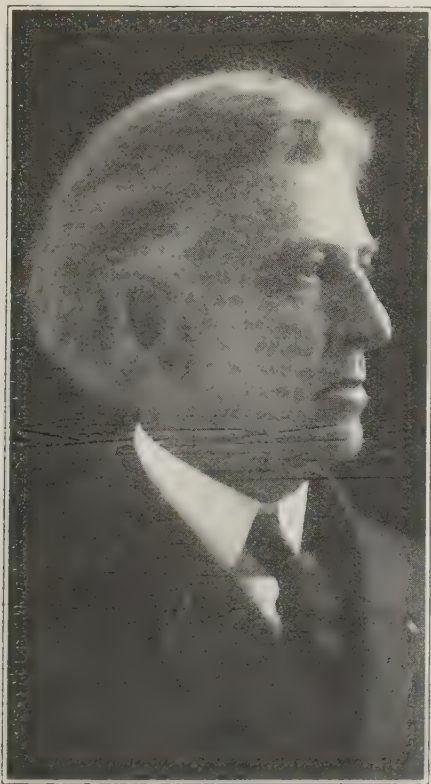
7. Each compressor installation should be equipped with a pressure gauge showing the air pressure in the system.

8. Each tank should also have a drain line to permit the removal of oil and moisture.

9. If a tank is used regularly, it should be drained once a day. This will eliminate the condensed water and reduce corrosion as well.

10. Tanks should be examined at periodic intervals to make certain that no leaks or defects have developed. To prevent rusting or corrosion they should be coated with a non-corrosive paint.

The dead line for filing claims for re funds on floor stocks held on Jan. 6, 1936, is Dec. 31.



Geo. S. Clayton, Denver, Colo., Deceased.

Crop Reports

Reports on the acreage, condition and yield of grain and field seeds are always welcome.

Charleston, Neb., Dec. 15.—Wheat has gone into the winter in fairly good condition. We received a little moisture last week. The ground is badly in need of subsoil moisture.—Farmers Grain & Lbr. Co.

Tecumseh, Neb., Dec. 9.—A two to five inch snow, preceded by a light rain, helped wheat prospects over Nebraska and Kansas points on Dec. 5. This territory has been very dry and this light moisture will help only temporarily. —R. E. Harrington, with Geiger Grain Co.

Evansville, Ind.—The winter wheat acreage in the Evansville area, largest in recent years, is entering the winter in fair condition, according to C. E. Shiver, Purdue agronomist, "The wheat does not have a large top growth, but has a good root development and with normal weather conditions will come through in good shape."—W. B. C.

Chicago, Ill.—The condition of winter wheat Dec. 1, based on reports and modified by moisture studies, that is, relationship between fall moisture, etc., and final yield, in line with the government's recent methods, is estimated at 77.0% of normal and the 1937 crop at 585,000,000 bushels. Abandonment of about 18% is expected.

—R. O. Cronwell, statistician Lamson Bros. & Co.

Toronto, Ont., Dec. 15.—The preliminary estimates of 1936 field crops produced in Ontario compared with the 1935 production are as follows. The 1935 figures being given first: Fall wheat, 12,600,700 bus. and 12,742,500 bus.; spring wheat, 1,857,100 and 1,737,000; oats, 85,560,800 and 68,639,300; barley, 16,841,000 and 14,332,000; fall rye, 1,044,400 and 892,200; buckwheat, 3,896,500 and 3,964,600.—S. H. H. Symons, statistician.

Urbana, Ill.—The area seeded to corn in Illinois next year is to be somewhat less than the 9,133,000 acres planted last year, according to the plans brought from Washington. We are importing corn. Yet some of the best corn land in the world and some of the best corn farmers in the world are to be discouraged from planting corn, though there is every reason to think they could harvest it profitably to themselves and the nation.

Decatur, Ill., Dec. 12.—The movement of corn this year is the most unusual we have ever seen. Because of the failure of the crop in the Missouri River territory, Illinois corn is moving into that section instead of to Chicago. On the

other hand, Chicago has been getting corn from as far east as Michigan and Ohio. This is a natural development of the unusual conditions, as the East is flooded with Argentine corn and Ohio, Michigan and Indiana have to look to the West for a market.—Baldwin Elevator Co.

Evansville, Ind.—More fall plowing in southern Indiana this year than in any past year, according to C. E. Skiver, Purdue agronomist. Two things, he believes, has caused the farmers to follow the practices which Purdue University has recommended. One is the exceptionally fine weather and the other is the improved agricultural outlook. The fall plowing also has fitted in with the garlic control program, which suggests late plowing, so the onion sets are turned over during their main growing season.—W. B. C.

Winchester, Ind., Dec. 19.—I drove some 250 miles in north central Indiana yesterday and found while we had a good stand of wheat everywhere there was some of it that was very short, could barely see that it was there, but in talking to farmers, they say that the wheat is all right, was just sown late, and was deficient in moisture for some time then it turned cold and we have had freezing weather for a couple of weeks, but there is nothing alarming about the condition of the wheat as we see it. —P. E. Goodrich.

Dodge City, Kan., Dec. 16.—The first week of December brought much needed moisture to practically all points in Kansas, averaging from $\frac{3}{4}$ to 1 inch over all except the northwest corner of the state, where only about $\frac{1}{4}$ inch fell. This gave the wheat plant new life and improved the top soil condition, but as yet the subsoil is very dry in most localities except the summer fallow acreage, which is in satisfactory condition. The warm sunny weather the past ten days has permitted the plant to make some growth, as yet temperatures have not been low enough to force the plant into winter dormancy.—J. F. Moyer, sec'y Kansas Grain, Feed & Seed Dealers Ass'n.

Washington, D. C., Dec. 12.—The generous rains which in September broke the drought of 1936 over much of the interior of the country, especially in the Ohio and middle Mississippi valleys and in the southern plains, did not continue thru October and November. Precipitation in the Midwest has been generally light since September. Most states from the Great Plains westward now need moisture. Soil—especially the subsoil—is very dry in most of the Pacific area and in the North Central states. Because of the condition of the subsoil, the winter wheat outlook in the Northwest is not good, altho from the Mississippi Valley eastward it is favorable. The outlook for spring wheat depends on snowfall this winter and rainfall next spring and early summer.—J. B. Kincer, U. S. Weather Bureau.

Madison, Wis., Dec. 22.—Wisconsin now has the largest acreages of winter wheat and rye that have been sown in the state in many years.

Reports from the state's crop correspondents the first of the month indicate that this fall Wisconsin farmers planted the largest rye acreage in about 20 years. Due to the drought, farmers increased their rye acreage for fall and early spring pasture as well as for grain. Winter wheat acreages throughout the state are also larger and it is estimated that Wisconsin has the largest acreage in the last 10 years. With excellent fall weather and good growing conditions, Wisconsin crop reporters indicated that the condition of winter wheat and rye on Dec. 1 was 80% of normal. Given favorable weather during the winter months, the state will probably harvest one of the largest rye crops since the world war.—Wisconsin Crop Reporting Service.

Big Acreage of Winter Wheat

Washington, D. C., Dec. 21.—The crop reporting board of the U. S. Dept. of Agriculture estimates the acreage sown to winter wheat at 57,187,000, against 49,688,000 acres last year.

Condition of winter wheat as of December 1 is given as 75.8 per cent of normal, compared with 78.2 per cent a year ago and the ten-year average of 87.4 per cent. Acreage abandonment this year was 24.3 per cent of the seeded area. Average abandonment for ten years (1923-32) was 12.6 per cent.

Rye area is estimated at 7,673,000 acres, compared with 6,547,000 acres last year, while condition of the crop is placed at 71 per cent of normal, compared with ten-year average of 84.9 per cent.

Acreage sown in leading winter wheat states:
(000 omitted).

	Autumn 1923-32	Autumn 1935	Autumn 1936
Ohio	1,898	2,307	2,538
Indiana	1,781	1,880	2,300
Illinois	2,232	2,226	2,782
Missouri	1,677	2,258	2,387
Nebraska	3,667	3,474	4,447
Kansas	13,255	14,244	16,523
Oklahoma	4,685	4,845	5,426
Texas	3,930	5,062	5,315
Washington	1,345	1,146	1,226
Oregon	869	805	660
California	725	923	877

The American Farm Bureau Federation adopted resolutions at Pasadena, Cal., Dec. 11, recommending agricultural tariffs to protect the domestic market from competing imports, reduction of industrial tariffs to equalize price levels of industrial and agricultural commodities, development of new outlets for farm products, state and federal marketing agreements, the holding of surpluses from market channels under a system of federal loans based on warehousing or trust receipts, and crop insurance on a trial basis on one or two commodities only.

Government Crop Report

Washington, D. C., Dec. 18.—In its final 1936 crop report the U. S. Dept. of Agriculture makes the following estimates of acreage and production (in thousands):

Crop	Acreage harvested Average		Production Average	
	1928-32	1926	1928-32	1936
Corn, all, bus.	103,341	92,495	2,553,424	1,524,317
Wheat, all	60,115	48,820	863,564	626,461
Winter	39,701	37,608	622,252	519,013
All spring	20,414	11,212	241,312	107,448
Durum	4,805	1,559	54,020	18,227
Other spring	15,610	9,653	187,292	99,221
Oats	40,015	33,213	1,215,102	789,100
Barley	12,645	8,322	281,237	147,452
Rye	3,315	2,757	38,212	25,554
Buckwheat	568	370	8,277	6,128
Flaxseed	2,772	1,180	15,996	5,908
Rice	927	935	42,826	46,833
Grain sorghums*.	7,016	7,000	97,760	55,701
Hay, all, tons.	68,458	67,777	80,911	70,273
Alfalfa seed	423	553	867	860
Clover seed (red and alsike)	1,191	1,111	1,522	1,278
Sweetclover seed.	243	280	859	698
Lespedeza seed, lbs.	79	272	10,161	38,364
Timothy seed	457	413	1,647	1,038
Beans, dry edible†	1,806	1,562	12,181	11,122
Soy beans	875	2,113	12,491	29,616
Cowpeas	799	1,261	5,392	7,626
Peanuts	1,417	1,736	1,302	1,300
Velvetbeans*.	1,414	2,236	587	859
Peas, dry field.	238	261	3,570	4,433

*Tons, for all purposes. †100 lb. bags.

Daily Closing Prices

The daily closing prices for wheat, corn, oats, rye, barley and soybeans for May delivery at the following markets for the past 2 weeks have been as follows:

Wheat													
	Option		Dec.	Dec.	Dec.	Dec.	Dec.	Dec.	Dec.	Dec.	Dec.	Dec.	Dec.
	High	Low	9	10	11	12	14	15	16	17	18	19	21
Chicago	135	104½	124	124	123¾	124¾	129½	129½	129½	130¾	132½	132½	129½
Winnipeg	128	95½	115	115	115½	116¾	....	121½	121½	123	126½	124½	121¾
Liverpool*	110¾	....	121½	123¾	123	122½	127	128½	127¾	128	130¾	130½	125¾
Kansas City	129½	102½	117½	118½	117½	119	124½	124½	127	124½	127½	126½	123¾
Minneapolis	142¾	115¾	132½	131¾	131½	133	137¾	137½	137¾	138	141	140½	137¾
Duluth, durum	148½	120	136½	136½	136½	139¾	144¾	144½	145	144¾	148	146¾	148
Milwaukee	134¾	98¾	121½	124	123¾	124¾	129¾	129¾	129¾	130¾	133¾	132½	....
Corn													
Chicago	106¾	85½	104¾	103¾	102½	102¾	105¾	104½	104½	104½	104½	104½	104½
Kansas City†	108¾	89¾	106¾	105¾	104¾	104¾	107¾	106½	106¾	107	107½	107½	107½
Milwaukee	104¾	88	102¾	101½	100½	100¾	103¾	102¾	102½	102½	102½	103½	....
Oats													
Chicago	51¾	38¾	49½	49	48½	49½	51½	50¾	50½	50¾	51	50¾	49½
Winnipeg	53	42½	49½	49¾	49¾	49¾	....	52	51½	51¾	52¾	51¾	49¾
Minneapolis	50½	39	48½	47¾	47¾	48¾	49¾	49½	49½	49¾	49¾	49¾	47¾
Milwaukee	51¾	40¾	49½	49¾	48¾	49¾	51¾	50½	50½	50½	51¾	50¾	....
Rye													
Chicago	115¾	75½	99	99½	99¾	101	106	106¾	109¾	111¾	113¾	111¾	109
Minneapolis	110¾	73½	95	95	94¾	97	101¾	101¾	104¾	106½	108	107½	107¾
Winnipeg	109½	62½	89	89½	89½	90¾	....	95¾	100¾	104¾	109½	105¾	102¾
Duluth	107¾	76½	94	94	93¾	96	100¾	100¾	100½	105½	107¾	106½	103½
Barley													
Minneapolis	82¾	60½	78¾	78	78	78¾	80¾	80½	80½	80¾	81¾	80¾	77¾
Winnipeg	75	50¾	67¾	69	67¾	68¾	....	72¾	72½	73¾	74¾	73¾	71¾
Soybeans													
Chicago	160½	120½	143½	145	143¾	145½	149¾	149½	151	154½	158	158	153¾

*At daily current rate of exchange. †New style. ††Old style.

Grain Movement

Reports on the movement of grain from farm to country elevator and movement from interior points are always welcome.

Seattle, Wash.—November grain loadings via rail ran 17% behind those of November, 1935, according to records of Pacific Northwest Advisory Board. This reflects the earlier movement to market this year and indicates also that in view of the recent market trend, the majority of Northwest growers closed out their crops too soon.—F. K. H.

Vancouver, B. C.—Receipts during November included 5,343,578 bus. wheat, 167,542 bus. oats, 4,770 bus. barley, against wheat 4,077,338, oats 244,406 and barley 5,409 a year ago. Shipments in November were 3,647,048 bus. wheat, 290,457 bus. oats, and 10,337 bus. barley, against 4,092,126 bus. wheat, 272,706 bus. oats and 9,695 bus. barley in November, 1935, as reported by E. A. Ursell, statistician of the Board of Grain Commissioners.

Chicago, Ill.—Lake shipments of grain from Chicago during the season just closed aggregated 19,424,000 bus. Clearances of 9,549,000 bus. of corn were made to eastern lake ports during 1936, compared with the all-time record low of 516,000 bus. in 1935. Shipments of wheat totaling 9,051,000 bus. went largely to Buffalo. Aggregate shipments last year were 5,481,000 bus. Soy bean shipments from Chicago during the year were 1,921,000 bus., all of which went to Montreal for export. In 1935 clearances were 1,558,000 bus.

Peoria, Ill.—November receipts of grain were: Wheat 92,900 bus., corn 1,451,900, oats, 96,000, rye 117,600, barley 297,600, soybeans 292 cars, compared with wheat 74,400 bus., corn 1,754,700, oats 180,000, rye 153,600, barley 312,000, soybeans 259 cars in November, 1935. Shipments during the same period were: Wheat 123,600 bus., corn 597,800, oats, 146,000, rye 2,400, barley 161,000, compared with wheat 72,000 bus., corn 943,600, oats 180,000, rye 30,600, barley 133,000, in November, 1935.—John R. Lofgren, sec'y Board of Trade.

New York, N. Y.—November receipts of grain included 2,416,628 bus. wheat, 750,000 bus. corn, 107,150 bus. oats, 1,700,000 bus. barley, 1,700,000 bus. rye, 886,800 bus. flaxseed, as well as 48 tons of millfeed; against 2,945,363 bus. wheat, 365,220 bus. corn, 448,250 bus. oats, 97,950 bus. barley and 1,700 bus. rye, 140 tons millfeed and 179 tons hay a year ago. Shipments included wheat, 944,000 bus., no corn, oats, or barley; against a year ago 1,416,000 bus. wheat, no corn, 24,000 bus. oats and 33,000 bus. barley, as reported by the Produce Exchange.

St. Louis, Mo.—November receipts of grain were: Wheat 574,200 bus., corn 2,415,000, oats 416,000, rye 30,000, barley 251,200, soybeans 99,400, compared with wheat 679,700 bus., corn 1,004,500, oats 248,000, rye 15,000, barley 284,200, soybeans 347,000, in November, 1935. Shipments during the same period were: Wheat 820,480 bus., corn 547,600, oats 228,200, rye 20,970, barley 43,200, soybeans 22,500, compared with wheat 652,500 bus., corn 903,450, oats 225,000, rye 12,000, barley 40,172, soybeans 292,500, in November, 1935.—W. J. Krings, Merchants Exchange.

The Rye Visible

The small quantity of rye in the visible supply affords some clue to the extraordinary advance in the price of the May future at Chicago during December. The visible was 5,444,000 bus. Dec. 12, and about the first of each month has been as follows:

	1936	1935	1934
January	8,915,000	12,481,000	13,678,000
February	8,387,000	11,461,000	12,993,000
March	7,537,000	10,732,000	12,102,000
April	7,362,000	9,555,000	11,459,000
May	6,861,000	8,950,000	10,794,000
June	6,756,000	8,632,000	9,820,000
July	6,292,000	8,479,000	11,277,000
August	6,009,000	8,856,000	12,038,000
September	6,615,000	9,931,000	11,610,000
October	6,344,000	8,270,000	11,514,000
November	6,089,000	9,186,000	10,865,000
December	5,598,000	9,825,000	13,243,000

Chicago, Ill., Dec. 18.—By lake 47,000 bus. of rye was received to-day from Montreal.

Cincinnati, O.—November receipts of grain were: Wheat 187,200 bus., shelled corn 1,329,000, oats 110,000, rye 14,000, barley 4,800, soybeans 7,000, buckwheat 2,800, compared with wheat 145,000 bus., shelled corn 507,000, oats 56,000, rye 16,800, barley 1,600, soybeans 2,800, buckwheat 4,200, in November, 1935. Shipments during the same period were: Wheat 315,200 bus., shelled corn 379,500, oats 58,000, rye 1,400, compared with wheat 266,000 bus., shelled corn 366,000, oats 42,000, rye 4,200, in November, 1935.—John O'Hara, in charge of inspection and weighing, Board of Trade, Inc.

Ottawa, Ont., Dec. 18.—Canadian wheat in store for the week ending Dec. 11, 1936, decreased 3,560,014 bus. compared with the previous week. The amount in store, including 3,461,218 bus. in rail transit, was reported as 116,493,450 bus. compared with the revised figure of 120,053,464 bus. for the previous week and 268,455,798 bus. for the week ending Dec. 13, 1935. Wheat marketings in the Prairie Provinces for the week ending Dec. 4, 1936, amounted to 1,912,236 bus., a decrease of 426,014 bus. from the previous week when 1,486,222 bus. were marketed. During the corresponding week a year ago, the receipts were 3,232,724 bus.—R. H. Coats, Dominion Statistician.

Decatur, Ill., Dec. 17.—Liberal country offerings of corn on every advance and receipts are large, considering the size of the crop; the high prices apparently proving attractive to farmers. Industries have large stocks on hand and have been none too aggressive buyers. Small quantities of corn are being delivered daily on December contracts, but the open interest is still large. Soy bean prices have been skyrocketing, which encourages holders to hang on tighter than ever to the beans they still have on hand. According to the Bureau of Agricultural Economics report, 55 per cent of the crop had been sold by growers by Dec. 1. The movement of beans to mills in November was the largest of any month on record. For the season to date, the movement has averaged a little faster than usual. In the important producing states the movement has been the fastest in Illinois, where 60 to 65 per cent of the crop had been sold. The principal movement of oats is by truck. One station this week reports 35,000 bus. sold to truckers since harvest time.—Baldwin Elvtr. Co.

Winchester, Ind.—Hogs are advancing in price and general opinion among raisers is we are going to see high priced hogs before next June. It is our observation in this particular part of the country that the corn crop has been closer marketed than for years. Corn is very wet, we had a sample Dec. 15 that contained 32% moisture and none of it contains less than 20% to 25% moisture, so everybody wants to get their corn to market quick. The movement of corn from our part of Indiana has been phenomenal, nothing like it for a great many years. We have handled at Winchester and our line of elevators more than three times as much corn from May 31 to Dec. 1 this year than we did in the previous year of 1935. Of course, a lot of this was old corn. All country dealers we have talked to say they have handled corn in the same proportion. We have talked to several of them in the last few days and they say farmers never sold their corn as close as they have this winter; that means the demand for feed this summer will be larger than for a number of years. Three weeks ago we were having almost daily complaints of corn spoiling in the cribs. Since the weather has turned cold we are not hearing of this, but corn still contains plenty of moisture.—Goodrich Bros. Co., P. E. Goodrich, pres.

Imports of Grain

Imports of grain during the period July to October, inclusive, compared with imports during the same period a year ago (shown in parenthesis), were as follows:

Barley, 4,889,000 bus. (391,000); barley, malt, 111,952,000 lbs. (113,676,000); corn, 15,116,000 bus. (21,879,000); oats, 37,000 bus. (42,000); rye, 2,828,000 bus. (2,090,000); wheat, dutiable at 32c per bu., 16,187,000 bus. (9,653,000); wheat, dutiable at 10% ad valorem, 3,379,000 bus. (2,679,000); wheat, milled in bond for export, 4,429,000 bus. (3,717,000); flaxseed, 4,347,000 bus. (5,622,000); rice, 41,493,000 lbs. (6,845,000).

Reversal of Chicago Corn Movement

Receipts of corn at Chicago have been decreasing from 92,879,000 bus. in 1933, 55,500,000 in 1934, to 32,970,000 bus. in 1935, but increased to 52,897,000 bus. for the first 11 months of 1936, as reported by the Chicago Board of Trade.

While the total receipts have decreased the receipts via the eastern and southeastern railroads have increased, having been 3,453,000 bus. in 1933, 4,289,000 bus. in 1934, 4,617,000 bus. in 1935, and 9,306,000 bus. during the first 11 months of 1936.

Arrivals at Chicago over the eastern and southeastern railroads during November alone amounted to 2,071,000 bus. This fall much corn that ordinarily would move from Illinois points to Chicago is going to the Missouri Valley territory, while Chicago is getting more corn from Indiana and Ohio.

Duluth Receives Canadian Grain

By F. G. CARLSON

Over 22,000,000 bus. of Canadian grain was received at Duluth during the navigation season of 1936. In addition Duluth received 1,500,000 bus. of Polish barley, Argentine corn and Argentine flax, and considerable quantities of winter wheat, moving westward from eastern states, contrary to the normal movement of grain in this country. The Northwest is actually shipping in grain.

The movement by lake to Duluth during the year has been feed wheat, spring wheat, durum wheat, oats, barley and rye, totaling 20,759,835 bus. from Fort William; 291,363 bus. of Polish rye, 51,514 bus. of Argentine corn, and 295,858 bus. of Argentine flax from the lower lakes; and 813,056 bus. of domestic winter wheat from Buffalo, Toledo and South Chicago. Bonded, afloat in the harbor, is 572,197 bus. of Canadian barley.

Total lake shipments of bonded wheat and barley during the year were 504,984 bus., compared with 607,518 bus. during the 1935 season.

Total lake shipments of domestic grain have generally been considerably below shipments during the short year of 1935, being 27,110,026 bus. in 1936, compared with 36,932,223 in 1935.

Final Figures on Flaxseed

Argentina continues to hold the spotlight in the world flaxseed situation. Early this week the government published its first estimate of linseed production for the 1936-1937 crop; the figure given was 74,000,000 bus. Our agent tells us that figuring in any possible old crop seed remaining, we should now estimate an exportable surplus of 68,000,000 bus. for the coming season.

The Argentine flax market has been very strong and active. We cabled our Buenos Aires correspondent to get an explanation, and have just received his wire as follows: "Linseed is under the influence of the exceptional strength of wheat and corn. Europe is interested in purchasing seed for prompt shipment. Harvesting has been delayed due to an excess of rain. The December movement of linseed is below normal. Sellers are demanding an extension in the time of delivery." Commenting further on our correspondent's statement and the action of the market, it would appear evident that the trade has interpreted the government's first production estimate as being quite bullish.

To add to the bullish aspect of the present situation, reports coming from Europe are to the effect that linseed oil markets as well as prices on other types of vegetable seeds and oils are very firm. Although political conditions abroad are unsettled, there is one very definite indication and that is that all European countries are anxious to secure as large a supply of raw materials as possible.

The Argentine government's third and final estimate of sown area for the present flax crop is 7,437,042 acres.

The United States government's final crop report gives the total 1936 flax acreage as 1,180,000, and the production 5,908,000 bus.—Archer Daniels-Midland Co.

South Dakota's Association Continues Cheerful

In spite of the great drouth and the swirling dust storms that have devastated sections of South Dakota for several successive years, the 30th annual convention of the Farmers Elevator Ass'n of South Dakota, held in the Cataract Hotel, Sioux Falls, Dec. 8, 9, and 10, attracted a big attendance.

The morning hours of Tuesday, the first day of the convention, were devoted to registration.

Tuesday Afternoon Session

PRES. CHRIS JENSEN, Putney, presided at the opening session.

Invocation was pronounced by Rev. Hugh B. Jones.

Hon. A. F. Graff, mayor of Sioux Falls, warmly welcomed the visitors. F. J. Cross, Randolph, responded for the ass'n.

SECY G. C. ANDERSON, Aberdeen, gave his annual report.

H. M. SIMMS, St. Paul, Minn., reviewed "Trucking Problems," saying: The roving itinerant merchant trucks create a problem that cannot be denied. If progress means that the railroads must give ground to the advance of the trucks, the inevitable might as well be faced, and those who are now dependent upon the railroads might well begin adapting themselves to the new form of transportation.

The answer for the railroads is not altogether one of adjusting rates. Several attempts to adjust livestock rates to attract business have failed. The big share of live stock hauling still goes to the trucks.

Highly restrictive regulations governing rail traffic constitute a millstone about the necks of the railroads. Unfettered by similar restrictions, the trucks have an advantage. Railroads pay heavy taxes; trucks do not pay a rightful share for the construction and maintenance of the roads they use. Furthermore the large trucks are a serious menace to ordinary traffic on the highways, and cause twice the accidents caused by ordinary vehicles.

Adjourned to Wednesday morning.

Tuesday Evening Entertainment

PROF. WARD L. MILLER of Brookings College entertained a large audience Tuesday evening with an amazing repertoire of magic, card, hat and rabbit tricks.

Wednesday Morning Session

VICE-PRES. C. A. WOODS, Plankinton, presided at the second session.

R. J. MUNN, representing the Grain Dealers Mutual Fire Insurance Co., introduced a moving picture on the cause and results of dust explosions. The picture, provided by the U. S. Department of Agriculture, showed experiments proving the cause of dust explosions and illustrated the tremendous burden of destruction to life and property that follows carelessness in dealing with dust.

W. H. HOLIDAY, Omaha, associate warehouse examiner for the federal department of agriculture, explained the U. S. Warehouse Act. The federal warehouse receipt, he said, makes good collateral for loans on grain stored in country elevators. Government agents check the elevators for the volume and quality of grain for which warehouse receipts have been issued.

A. M. EBERLY, Brookings, talked on "Seed for Spring Planting." He reviewed a meeting of the Greater South Dakota Ass'n at Aberdeen, which adopted a resolution urging that federal seed loans be made available quickly to assure early planting for next year's crops. Getting the seed, he said, is as much a problem as getting the seed loans.

PRES. JENSEN delivered homely philosophy in a rambling address. It is gratifying to observe, he said, that even under the most grueling and difficult conditions imaginable we are still here, doing business of a sort at the old stand. This proves that we are tough, resilient and fit to survive. Let us hope that by the time the weather changes and permits us to raise crops for our elevators to handle again, that our marketing machinery will not be so loaded down with government restriction as to be unable to function.

I still believe that competition is the life of trade, the father and mother of progress and even the conservator of freedom. Without competition everything in life becomes dead and meaningless.

The merit in private capitalism is that it leaves both the initiative and responsibility with the individual, and gives him room for the highest development of which he is capable.

E. H. SEXAUER, Brookings, pres. of the Greater South Dakota Ass'n, talked on the earnest efforts of that organization to build up seed stocks and livestock which will rehabilitate the state with better grain and better livestock. In the past South Dakota has produced more wealth per capita than any state in the Union, he declared, in the future we may expect it to do so again.

D. S. KELLY, Pierre, of the State Railroad & Warehouse Commission, felt that the federal warehouse act need not and should not interfere with intrastate warehousing.

Adjourned to 2 p. m.

Wednesday Afternoon Session

PRES. JENSEN presided at the third session.

S. W. WILDER, Cedar Rapids, Ia., pres. of the Grain & Feed Dealers National Ass'n, discoursed on crop insurance and grain storage, reviewing experiences of the grain trade com'te before the Department of Agriculture on this subject. His address was published on page 463 of the Dec. 9 issue of GRAIN & FEED JOURNALS.

C. W. PUGSLEY, Brookings, pres. of the South Dakota State College, gave a historical review of the agricultural development of South Dakota.

Adjourned to Thursday morning.

Annual Banquet

E. C. HILLWEG, Minneapolis Chamber of Commerce, was the toastmaster, quickly turning the Wednesday evening banquet entertainment over to a master of ceremonies, Lee Bright, who introduced the pianist, the accordion players, the dancers, the juggling act, and even did some singing himself.

Thursday Morning Session

IRA OVERTON, Webster, presided at the Managers' Session, which opened the proceedings Thursday morning.



Chris Jensen, Putney, S. D., Was Re-elected Pres.

F. S. BETZ, Chicago, reviewed "Tax Problems" covering the question of income taxes, and warning the delegates to not overlook the difficulties created by the social security act.

In a business session following the managers' meeting Pres. Jensen was re-elected to succeed himself, as were also directors F. J. Cross, Randolph, and J. W. Barrett, Hazel. Holdover directors are E. A. Maxwell, Vermillion; Andrew Nelson, Colman; C. A. Woods, Plankinton; S. S. Judy, Forestburg; Joe Lapka, Leola.

Final action of the convention was adoption of a series of resolutions. Major recommendations were as follows:

Resolutions Adopted

Seed Grain

We the Farmers Elevator Ass'n of South Dakota approve the action taken by the Northwest Seed Conference in the following statement of resolutions adopted at that time:

WHEREAS, the farmers of the states of the Northwest, by reason of successive drouths, find themselves facing a shortage of seed grain for planting during the 1937 crop season, and

WHEREAS, the United States government has purchased and is holding stocks of certain of these seeds, be it

RESOLVED, by the Northwest Seed Conference in session at Aberdeen, S. D., this 24th day of November, 1936, that we petition the United States government immediately to take steps as follows:

1. To distribute the seed which it has accumulated so that these farmers may be able to obtain the seed as soon after Jan. 1, 1937, as possible;
2. To establish agencies to determine those farmers who may obtain the seed, and decide the matter of settlement therefor;
3. To distribute the seed thru the established dealers in each territory; and
4. To determine the sales prices of each class of seed and allow its sale to all farmers who desire to purchase same.

WHEREAS, the past experience of delayed seed loans have caused serious losses in grain crops of the farmers of the Northwest, and

WHEREAS, the successive drouth of the past years has made it necessary for such farmers to look forward to a seed loan in 1937, be it

RESOLVED, by the Northwest Seed Conference in session at Aberdeen, S. D., this 24th day of November, 1936, that we petition the United States government that action be taken as soon as possible to establish the seed loan agency, receive applications and obtain the necessary funds to make such loans in time for planting, not later than Feb. 15, 1937, and further that the United States government immediately make public announcement of its seed distribution and financing policy for 1937.

Seed Survey

RESOLVED, that because an immediate and accurate seed survey is necessary, this ass'n appoint a com'te of two members to co-operate with the Extension Service and the Northwest Seed Com'te to provide proper information upon which our claims to be presented to the government are based; and because of the seriousness of the situation every elevator is urged to co-operate to the fullest extent.

Transportation of Foodstuffs

WHEREAS, there is an altogether too prevalent practice on the part of many truckers, of transporting foodstuffs in very filthy and exceedingly unsanitary livestock trucks; therefore be it

RESOLVED, that the State Board of Health be urged to sponsor enactment of a law giving it power to regulate transportation of foodstuffs in a clean and sanitary manner by such truckers.

Truck Regulation

RESOLVED, that the State Railroad & Warehouse Commission be empowered to regulate the rates and services of all trucks for hire; and that the officers of this ass'n be directed to use their best efforts to bring this about.

Crop Insurance

RESOLVED, that, in the tentative draft of the crop insurance program proposed for enactment by Congress at its next session, this ass'n heartily endorse the plan of utilizing grain storage on the farm and in the local elevators of the communities to the fullest possible extent, to the end that these products be handled to the economic advantage of the producers.

Repeal Long and Short Haul Clause

RESOLVED, that, subject to the power of the Interstate Commerce Commission to suspend and investigate any tariff which is filed, to fix maximum and minimum rates, and to prohibit unreasonable discrimination, we are in favor of repeal of the long and short haul clause of the fourth section of the Interstate Commerce Act.

Adjourned sine die.

A Soybean Elevator

The new soybean elevator recently completed at 22nd and Lumber streets, Chicago, Ill., for Spencer Kellogg & Sons, Inc., has a capacity of 800,000 bushels and brings the capacity of this plant up to well over a million bushels.

The need for this additional storage became apparent when it was decided to convert the linseed oil mill into a soybean oil mill to meet the demand for that product. New machinery of the latest type has been installed thruout, which makes it one of the largest producers of soybean oil in this part of the country.

THE NEW STORAGE consists of a reinforced concrete structure resting on pile foundations with a full basement. It is composed of sixteen circular bins, 24 ft. 4 in. inside diameter by 108 ft. 6 in. high, built in two parallel rows and interconnected so as to provide seven interspace bins and ten outerspace bins. The storage is 58 ft. 0 in. wide by 204 ft. 6 in. long.

Extending from the head house to the opposite end of the storage is a structural steel corrugated metal covered cupola for housing the 30 in. distributing belt conveyor and tripper. In the basement of the storage there have been provided two 30 in. belt conveyors for reclaiming beans from the various bins and dis-

charging them into the main elevator leg. In one of the new storage bins there has been provided a 4,000-bu. bin for serving the mill.

Three spouts have been provided from the bin floor of the new storage to reach the existing car spouts, so that beans may be loaded from the new storage to cars spotted at the car spouts. This facility was provided so that this storage may also serve some of their other plants if need be.

A similar spout was provided from the bin floor of the new storage to a screw conveyor for discharging to the existing drier. A shipping bin of 3,000 bus. capacity has been provided at the river end of the storage and provided with a telescoping spout for loading boats and barges.

A HEAD HOUSE of reinforced concrete rises over the storage at one end, which accommodates a 15,000-bu. main elevator leg, a 3,000-bu. garner and a 2,500-bu. hopper scale. A stairway extends from the basement into the head house, and there is provided a traveling belt employees' elevator from the basement to the scale floor.

Trackage for handling the incoming soybeans was a problem to overcome in the design of the storage, as the plant adjoins the south branch of the Chicago River, which precludes the use of thru tracks. Furthermore,

being located in a thickly populated industrial district, the amount of switching permitted is limited.

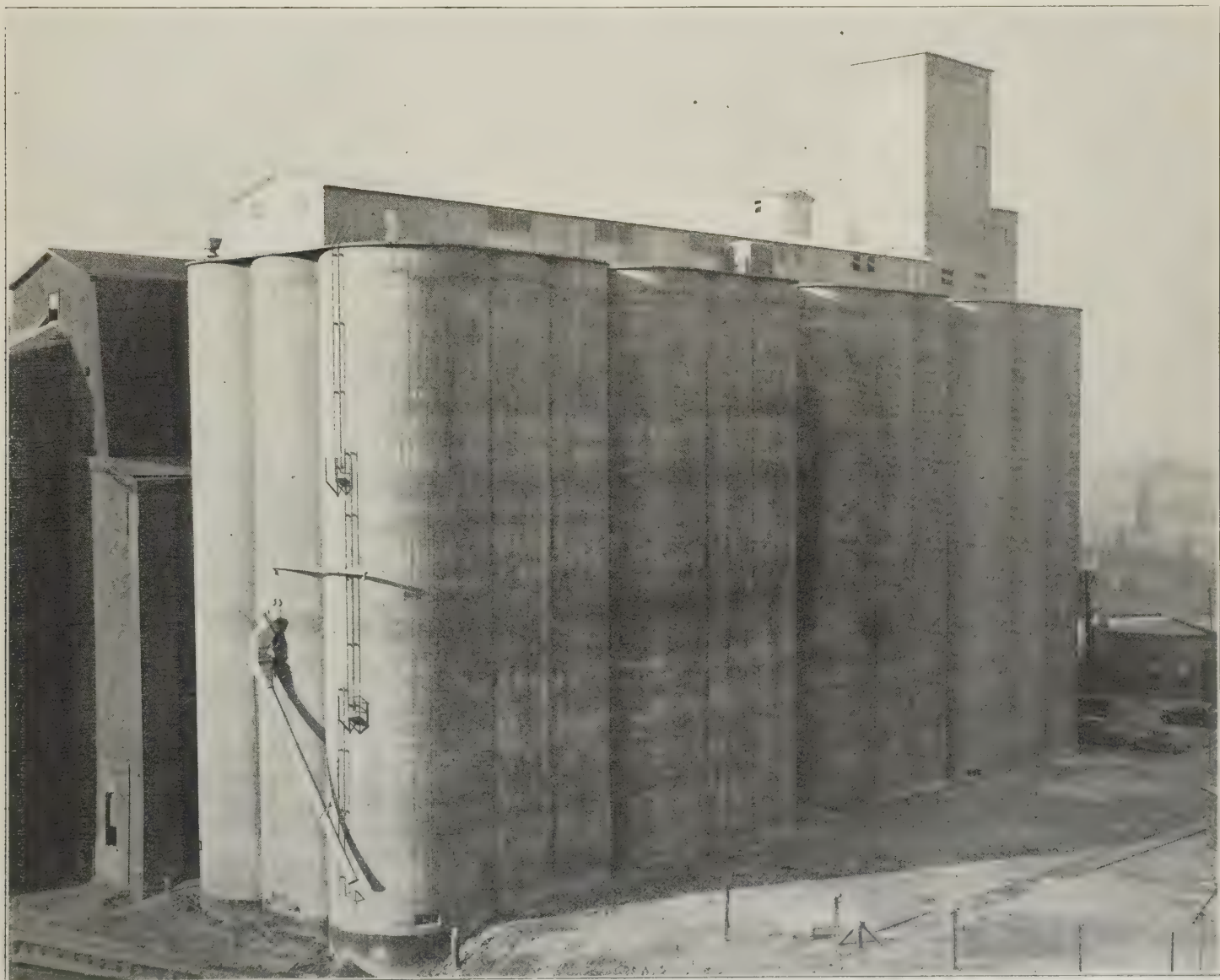
A solution to the problem was arrived at by providing two extra receiving pits on the tracks which served the original elevator, making it possible to spot eight cars at receiving pits at one switching. Thus with two switches per day they can unload 16 cars in 24 hours.

The original elevator having been built many years ago, before the era of large freight cars, the receiving pits were placed too near together to permit spotting present size cars over adjacent pits. This condition was corrected by remodeling the original pits, placing them at 45-ft. centers and discharging their contents to the receiving elevator legs by means of 16 in. motor driven screw conveyors.

In order to facilitate fast unloading the original receiving elevator legs were increased in capacity from approximately 7,000 bus. per hour to 15,000 bus. per hour. At the same time new motors and gear reducer drives were provided to replace the old belt driven spur and mortise gears. New car shovels were also provided in connection with the new receiving pits.

For receiving beans there has been provided a 30-ton truck scale and dump so that the largest size trucks can be accommodated.

A screw conveyor has been provided thru the original elevator to receive beans from the mill bin and deliver them to the mill. In order to deposit beans received in the original elevator into the new elevator there has been pro-



Spencer-Kellogg & Sons' New Soybean Elevator at Chicago has Capacity for 800,000 bus

Estimating Quantities of Grain for Warehouse Accounting

By Frederic C. Dobson

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vided a 36 in. belt conveyor on the bin floor of the original elevator. This conveyor receives beans from the original scales and discharges to a cross conveyor and jack leg in the new elevator, which in turn discharges directly to adjacent bins or to the distributing conveyor in the new storage.

No marine leg was provided with the new work as there is one in connection with the original elevator. Speed and flexibility was the watchword in the development of the expansion, and looking to further expansion, was given thoughtful consideration.

The design and construction was by James Stewart Corporation in conjunction with Godfrey Morgan of Buffalo, N. Y., manager of elevators for Spencer Kellogg & Sons, Inc.

Equipment was furnished as follows: Elevating and conveying machinery by J. B. Ehrsam & Sons Mfg. Co.; gear drives, Falk Corporation; hopper scale, Fairbanks Morse & Co.; truck scale, Howe Scale Co.; and elevator buckets by Weller Metal Products Co.

Elevating Grain Efficiently

By P. F. McALLISTER

Mr. Owner or Mr. Manager, this is a question you must answer for yourself if you wish to compete in these days of Hard Roads and Long Hauls.

Speaking of country elevators, altogether too many of them have "horse and wagon day" elevator legs, dumps and distributors.

About nine out of ten elevator legs can be increased in capacity merely by changing to certain types of buckets, spacing them properly, increasing the belt speeds and installing a distributor and spouting to correspond with the increased belt speed and carrying capacity.

Many elevator legs of course, due to lack of upkeep in recent years, need complete replacement.

The first question you ask is, "How much will it cost?" and the answer is, "How much does an automobile, or suit of clothes, or a hat cost?"

The real answer is, "What are the real conditions?" What ails your equipment? Have you enough power? Are your drives heavy enough to carry an increased load? In other words, call in a "Doctor of Elevators" and tell him the symptoms; let him examine the premises.

Recently I have been called in on two of these cases. In one case, the manager had replaced a leg belt and cups, the same size as he had; needless to say, he did not increase his capacity. Had I been called sooner, I could have increased his elevating capacity 100% by use of special buckets and closer spacing. What was really accomplished was changing a motor drive to a positive drive and the installation of a modern distributor and larger spouting.

The second case was a new elevator (3 years old) where the contractor used a certain popular type bucket with a certain rated capacity. However, the leg did not deliver, and the answer to this problem was a set of new buckets the same size but a different make and an improved distributor with a direct discharge after leaving the head, thus giving the grain an increasing velocity, and being able to get the grain away in the spout instead of part of the grain going back down the leg commonly known as "back-legging."

These cases are typical, so take an old timer's suggestion and call in a competent engineer or contractor to diagnose your conditions or write this Journal.

The complete disappearance of carlot distributors of fruits and vegetables is only a matter of time, contends the Associated Southwest Country Elevators, unless means are found to curb the itinerant merchant trucker.

CHAPTER V. METHOD OF CALCULATING CAPACITIES OF BINS

Success in all estimating practice depends, in part, on the accurate measurement of the bins involved and the calculation of their PFCs and MDs. The importance of the accuracy of this measurement and calculation cannot be overstressed. An error of *one inch*, for example, in the measurement of the diameter of a 22' circular bin makes a difference of 2.54 bushels in the PFC and 254 bushels in 100' of depth, which would be enough to throw an estimate considerably out of line. The following method of calculating these factors, while sufficiently broad to be applicable to any bin encountered in old or modern elevators, is at the same time practical because it involves only simple geometry.

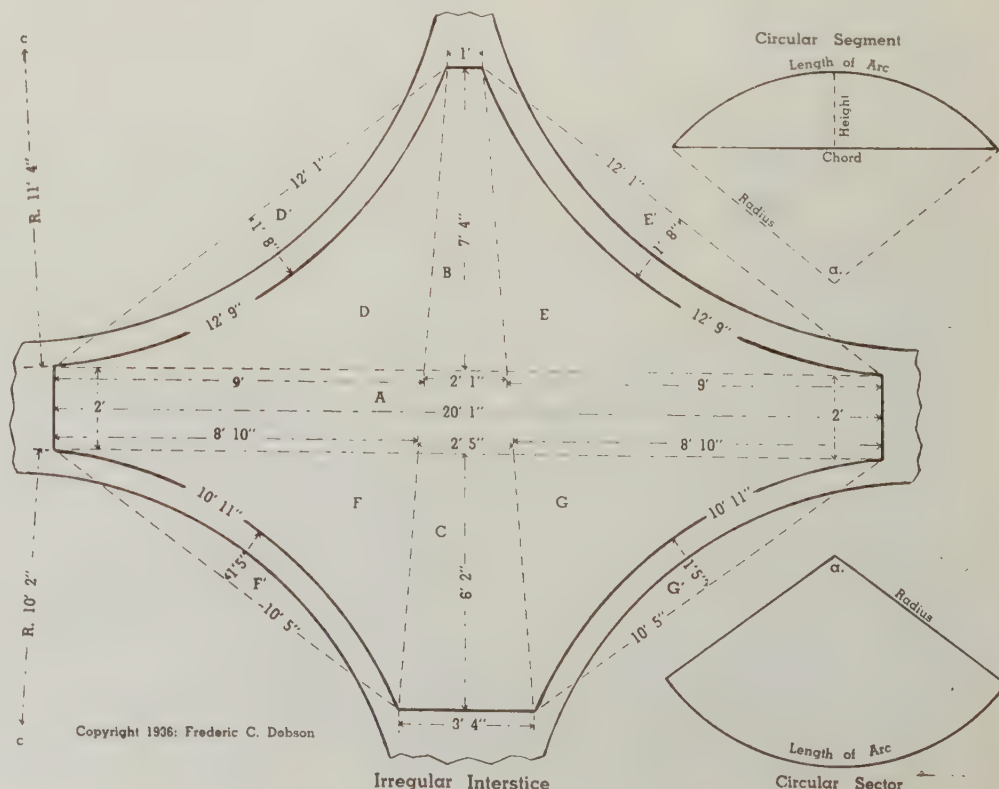
A.—PFCs. The PFC is the capacity, in Winchester bushels, of each foot of depth of a bin. The volume of a Winchester bushel is 1.2445 cubic feet, and the PFC, therefore, is the volume, in cubic feet, of one foot of depth of a bin divided by 1.2445, or multiplied by the decimal 0.8035. The volume of one foot of depth of a bin is equal to the area of a cross-section, multiplied by 1.0, multiplied by 0.8035, or, if A = cross-sectional area in square feet, $PFC = A \times 1.0 \times 0.8035$, or $PFC = A \times 0.8035$.

Determining the cross-sectional areas of square, rectangular or circular bins involves only simple mathematical calculation but in the more recently built concrete elevators many odd shaped bins and interstices are encountered, particularly where additions have been made to old storage units or where major repairs or reconstructions have been made after fires and explosions. There is also a tendency of late to install elevator legs in storage units so they may be operated independently and this also often results in irregular bins and interstices.

When the proper measurements are taken, the exact cross-sectional area of any bin can be found, regardless of its irregularity, by dividing it into regular planes such as triangles, rectangles, trapezoids, circular sectors and circular segments, the areas of which can be found by application of the proper formulae. As changes are often made during the construction of elevators, contractor's blue-prints have not been found reliable for this purpose, and wherever possible all measurements should be taken directly from the bins. In dividing a bin's cross-sectional area into regular planes, the physical impossibility of obtaining some of the necessary measurements directly from the bins will be evident. In such cases the necessary measurements can be taken from a scale drawing similar to that shown in the following example, which demonstrates this method of determining the PFCs in irregular bins.

The interstice shown in the engraving herewith has been formed between two tangent, circular concrete bins of 10' 9" inside radius, and two circular bins of 9' 7" inside radius, the latter two bins being spaced to align their centers with those of the tangent bins. This is typical of the irregular interstices formed when additions are made to old storage units and every foot of available space must be used.

Dividing this interstice into regular planes, its components are seen to be: one rectangle (A), 20' 1" \times 2', two trapezoids (B), 7' 4" \times 2' 1" \times 1' and (C), 6' 2" \times 3' 4" \times 2' 5", and four triangles, D, E, F, and G, less four segments, D', E', F' and G'. Triangle D has a base of 9' and a height of 7' 4". Triangle E is equal to D. Triangle F has a base of 8' 10" and a height of 6' 2", and triangle G is equal to F. Segment D' has a radius of 11' 4" (inside radius of bin plus 7" wall), an arc of 12' 9", a chord of 12' 1" and a height of 1' 8". Segment E' is equal to D'. Segment F' has a radius of 10' 2", an arc of 10' 11",



a chord of 10'5" and a height of 1'5". Segment G' is equal to F'.

In the following solution, established geometric formulae are shown—first in the form in which they are applicable to any similar problem—and then in their application to this one. Symbols used are: A = area, D = diameter, R = radius, C = length of chord, L = length of arc, H = height of segment, a = angle, h = height of triangle or trapezoid, b = base, b' = shorter base.

Rectangle	Sq. Ft.
(A): $A = h \times b$, or $2' \times 20'1"$	= 40.16
Trapezoid	
(B): $A = \frac{1}{2}h(b + b')$, or $\frac{1}{2} \times 7'4" \times (2'1" + 1')$	= 11.2882
(C): $A = \frac{1}{2} \times 6'2" \times (3'4" + 2'5")$	= 17.71
Triangle	
(D): $A = \frac{1}{2}h \times b$, or $\frac{1}{2} \times 7'4" \times 9'$	= 32.985
(E): Same as D	= 32.985
(F): $A = \frac{1}{2} \times 6'2" \times 8'10"$	= 27.104
(G): Same as F	= 27.104
Sum of A, B, C, D, E, F and G	= 189.3362
Segment	
(D'): $A = \frac{L \times R - C \times (R - H)}{2}$, or $\frac{12'9" \times 11'4" - 12'1" \times 9'8"}{2}$	= 13.8823
(E'): Same as D'	= 13.8823
(F'): $A = \frac{10'11" \times 10'2" - 10'5" \times 8'9"}{2}$	= 9.879
(G'): Same as F'	= 9.879
Sum of D', E', F' and G'	= 47.5226
$(A + B + C + D + E + F + G) - (D' + E' + F' + G')$	= 141.8136

which is the area of a cross-section of this interstice. Now, applying the formula to find the PFC of the bin: $PFC = A \times 0.8035$, of $141.8136 \times 0.8035 = 113.9472$ or 114 bushels.

Other formulae used in calculating areas of

irregular planes:

$$\text{Circular Sector, (See engraving), } A = \frac{L \times R}{2}$$

$$\text{If L is unknown, } L = \frac{R \times a \times 3.1416}{180} \text{ or } \frac{2 \times A}{R}$$

$$\text{If a is unknown, } a = \frac{180}{R \times 3.1416} \times \frac{2 \times A}{R}$$

$$\text{If R is unknown, } R = \frac{180 \times L}{a \times 3.1416}$$

$$\text{Circular Segment, (See engraving) } A = \frac{R \times a \times 3.1416}{2}$$

$$\text{If L is unknown, } L = \frac{180}{a \times 0.01745} \times \frac{1}{3} \text{ (indef. dec.)}$$

$$\text{If C is unknown, } C = \frac{2 \times \sqrt{H} \times (2 \times R - H)}{C^2 + 4 \times H^2}$$

$$\text{If R is unknown, } R = \frac{8 \times H}{3.1416 \times D \times D} \text{ or } 0.7854 \times D^2$$

$$\text{If D is unknown, } D = \frac{\text{Circumference} \times 0.31831}{\text{In circular bins only, } PFC = 0.6310689 \times D^2}$$

Engineers familiar with the polar planimeter will recognize in the use of this instrument a simple and efficient method of determining exact cross-sectional areas of irregular bins. When the scale drawing has been accurately laid out, areas can be computed by use of the planimeter with a higher degree of accuracy than can result from dividing into regular planes. The precise, mechanical action of the instrument eliminates a great deal of the natural, human error and the saving in time is considerable.

B—MDs. The MD or mean depth of a bin is the depth of the vertical walled part of the

bin plus the equivalent depth of its hopper. The hoppers of most circular bins are either inverted cones, or (if not exactly "center-flow"¹⁹), conical in shape. Hoppers of most interstices and rectangular bins are inverted pyramids or pyramidal in shape. As the volume of either a cone or a pyramid is one-third the height times the area of the base, the equivalent depth of these hoppers would be one-third their actual depth. The equivalent depth of hoppers of circular or rectangular bins with extreme "side-flow"¹⁹ is usually equal to one-half their actual depths. Occasionally bins are hoppers with two or more outlets, and calculation of their equivalent depths involves formulae too lengthy to be practical, but usually observations can be made that will enable the estimator to determine a fairly accurate equivalent depth. The expedient of filling the hopper with a known quantity of grain, the test weight of which has been determined, can be resorted to in extreme cases, but here the unfixed packing effect prevents absolute accuracy and this method should be used only where it is impossible to calculate the depth exactly. Occasionally flat bottom bins are encountered in old wooden houses or in temporary storage units. Of course the MDs of these bins are their extreme depths.

19. Center-Flow Bins are those having one outlet at the exact center of the bottom. Side-Flow Bins are those having one outlet located at or under an outside wall.

Manhattan, Kan.—Eleven years ago, when the Argentine asked the Kansas state agricultural college about the new Kanred wheat it had developed, it was referred to Albert Weaver, Bird City, one of the largest wheat growers in the state. Mr. Weaver sold the South Americans 1,200 bus. of Kanred seed. Argentina now grows Kanred wheat almost exclusively.

The Parker Elevator at Hugoton, Kan.

An attractive example of the reinforced concrete elevator which is coming into increasing popularity in the great wheat producing areas of the Southwest is the 50,000 bu. elevator of H. V. Parker at Hugoton, Kans. This is essentially a grain receiving, storing and shipping elevator, Mr. Parker handling only grain and seeds in carlots. During the summer he enjoys a large movement of wheat and in the winter is kept busy with kaffir and milo.

The grain storage space is contained in four tanks, each 13 feet in diameter and 75 feet high, with 2 interstice bins and 6 bins between the tanks above the work floor. Above the tanks a 15x30 ft. cupola rises upward 23 feet.

Attached to one side of the elevator is a 14x32 ft., shed-type driveway that covers the Ehrsam pneumatic truck lift, and the long, grate-covered receiving sink.

The fast handling leg has capacity to elevate 2,500 bus. of grain per hour, using Ehrsam V cups on 9 inch centers. From the leg head grain is directed thru steel spouting to the cylindrical tanks, to the inter-space bins, or thru a 10 bu. Richardson automatic shipping scale into a long loading spout that throws the grain well to the ends of the largest box cars. The leg is driven by a 15 h. p. Fairbanks-Morse motor thru an Ehrsam head drive.

Operating controls to all the machinery are centered on the work floor. The leg well is made extra large to provide plenty of room around the boots.

Built of reinforced concrete and steel, the only wood parts in this Chalmers & Borton built elevator are the guides for the man-lift, and the platform of the trucklift. On the outside, the cold, grey color of the concrete is relieved by a modern black band at the base of the elevator, and the under parts of the eaves are black.



Concrete Elevator of H. V. Parker Grain Co., Hugoton, Kan.

The Chicago Market During 1936

By ROBERT P. BOYLAN

President Chicago Board of Trade

The grain trade as a whole has shared in the increased measure of prosperity that has come to the United States the past season.

Although a disastrous visitation of drought over large areas of normally productive farm lands again reduced yields of several cereal crops to a severe extent, increased prices have made up for this to a large degree.

Improved general business and the expansion of buying power resulted in fair prices for farm products during the early months of 1936. And drought damage later stimulated activity both in futures and in cash grain.

Fortunately for our great farming areas, price upturns in all grains were substantial and steady thruout the harvesting periods and grain growers, as a result, were the principal beneficiaries.

A notable feature of the year is the fact that in all grains, and at all times, the cash markets have dominated the situation rather than any speculative activity.

Regardless of substantial advances in futures contracts, the cash markets have kept ahead. Highest prices for all grain futures were registered late in the year, the general average reaching top levels since 1933, the main incentive being the persistent absorption of cash grain at material premiums over the futures.

Soy Beans: An outstanding development, one which promises to result in increasing benefit to farmers, was the establishment on the Chicago Board of Trade of the world's only futures market for soy beans. Futures trading in soy beans was inaugurated on the exchange October 5, after the most thorough investigation had been made into the need for such facilities. The new market has performed splendidly, adding buying demand which broadens a field once occupied almost exclusively by processors.

The cash market for soy beans had broken from a price level of \$1.51 per bushel to the \$1.20 mark before our futures market opened. Since October 5, a date which coincides with the usual start of soy bean harvesting in the central west, soy bean values have advanced materially with all offerings both in cash and futures being absorbed readily in the Chicago market. Officials and members of the Chicago Board of Trade take a natural pride in the performance of the new market since it functioned from the start with all the ease and accuracy other Board of Trade markets have acquired over a period of almost 89 years.

This is not surprising, however, since our special soy bean committee's investigation revealed a consensus of opinion among growers, cash handlers and processors, favoring establishment of such an open market, giving soy bean interests the same trading advantages enjoyed by growers and handlers of other cereals.

The soy bean crop, both from the standpoint of the farmer who has found the crop decidedly profitable—also valuable as a catch crop or as a substitute for other grains, and from the standpoint of industry, is steadily increasing in importance. Value of the new market met with prompt recognition from the trade, a great part of its activities being due to hedging, or price insurance, which it makes available to processors. We feel that the facilities offered by this futures market will be a big factor in popularizing soy beans and that the exchange has taken a long stride forward by demonstrating its market leadership with a new product of agriculture.

The grain markets of Chicago and of the country have functioned smoothly so far under the Commodity Exchange Act, which became operative the middle of September.

There has been an absence in 1936 of spectacular market tactics, which in other years and under conditions similar to those which

developed this year because of drouth damage, would undoubtedly have caused violent price fluctuations, disturbing to market equilibrium.

In the wheat trade there has been a marked change from conditions prevalent for the past several years. As the result of small crops in some of the important producing nations for two or three years the tremendous surplus that hung over world markets has been reduced to a point of the closest adjustment of supply and demand since 1926-27.

Canada, in 1935, still was struggling with a surplus of such volume that it dominated the world situation and kept a ceiling over international prices that was impenetrable for many months. With the reduction of the Canadian crop to a total of 232,000,000 bushels, and with an export trade of much larger volume, Canada, at the beginning of this month (December) had an exportable surplus of only approximately 144,000,000 bu., compared to 285,000,000 bushels at the corresponding time in 1935.

Canadian wheat prices have advanced in line with Chicago and other world markets. The advance, however, has not prevented heavy imports to this country as mills here have been obliged to buy in order to eke out limited supplies of choice hard spring and hard winter wheats.

Because of drought losses, the United States has continued to occupy the role of an importer. Imports for nine months aggregated approximately 40,000,000 bu. wheat, 12,656,000 bu. corn, 2,188,000 bu. rye and 3,719,000 bu. barley in addition to substantial quantities of meats and dairy products.

Heaviest crop losses sustained were in corn, oats, and barley. The corn crop was estimated at 1,527,000,000 bu., compared to 2,292,000,000 bu. in 1935; oats made a yield of 784,000,000 bu., a reduction from 1935 of 413,000,000 bu. The production of barley was cut from 282,000,000 bu. in 1935 to 144,000,000 bu. this year.

Despite heavy losses in our northwest—the spring wheat yield being only 108,000,000 bu., compared to 159,000,000 bu. last year, the total 1936 wheat crop was 627,000,000 bu., or about 4 million bushels more than in 1935.

Certification of Flint and Dent Corn

The Grain Division of the Bureau of Agricultural Economics, by R. T. Miles, in charge of General Field Headquarters, on Dec. 3 notified grain inspectors and federal supervisors to take the following action to meet the change in the rules for grading corn:

"The amendment of the official grain standards of the United States for corn which becomes effective on Jan. 20, 1937, provides a definition for mixtures of flint and dent corn as follows: 'Flint and dent corn shall be corn of any class which consists of a mixture of the flint and dent varieties and which contains more than 5 per cent but less than 95 per cent of corn of any of the flint varieties.'

"In view of the imminence of the effective date of this amendment and the possible consequences which its adoption may have upon deliveries of corn against contracts of sale and warehouse receipts, the following instructions shall govern the certification of the grade of corn by all licensed grain inspectors and federal grain supervisors:

1. All certificates which are issued between Dec. 7, 1936 and Jan. 20, 1937, covering mixtures of flint and dent corn which are not graded 'flint' shall carry a percentage statement of each type, in any case when such mixture contains more than 5 per cent of flint. Such statement shall appear on the certificate as a statement of the grading factor.

2. On and after Jan. 20, 1937, the standards which were in effect prior to that date may no longer be legally employed. However, inspectors and supervisors may properly state, in the space provided for 'remarks' on the certificate, the grade of a lot of corn in terms of the standards that were in effect on Jan. 19, 1937, in all cases where there is a proper showing of evidence that the lot of grain involved is subject to a contract or warehouse receipt dated prior to Jan. 20, 1937.

"The following form and language for making the supplemental statement on certificates is hereby authorized as standardized usage for all certificates: 'This lot meets the U. S. Grade

specifications which were in effect Jan. 19, 1937, for corn.'

"It will be understood that inspectors and supervisors will make the statement described in Item 2 only when requested by interested parties, and after a showing of evidence that the lot of grain involved is subject to a contract or warehouse receipt dated prior to Jan. 20, 1937."

Restraint Ordered Stopped

Cited for attempts to restrain competition the Fall River (Mass.) Wholesale Grocers Ass'n and nine member firms, have been served with a cease and desist order by the Federal Trade Commission.

The ass'n is alleged to have informed manufacturers of its members' policy to refuse to deal with manufacturers of grocery products who have sold such goods directly to retailers in the Fall River region; and to have written to a producer of milk products that its surplus evaporated milk shipped in pool cars must not be delivered to a public warehouse and distributed direct to retailers, under threat of loss of business from members of the ass'n.

The order directed the ass'n and its members to cease adopting, enforcing, or attempting to enforce any understanding, agreement, combination or conspiracy among and between themselves in restraint of competition by interfering with the source of supply of retailers.

The 1937 A.A.A. Program

Henry A. Wallace, Sec'y of Agriculture, on Dec. 7 announced plans for the distribution of money collected from all taxpayers to those farmers who run their farms as advised by the government.

\$20 at least will be paid to any farmer no matter how small his farm. This is double the 1936 allowance, which was \$10.

\$6 per acre average will be paid for "diversion from soil depleting base."

\$3 per acre average will be paid for increases above the "soil conserving base."

\$8.50 per acre on cotton land averaging 170 lbs. of lint, for diversion.

Payments will be made for soil building practices.

These 1937 payments are contingent upon appropriation by Congress of \$500,000,000 authorized to carry out the Soil Conservation and Domestic Allotment Act. Payments by employees and employers under the new Social Security Act into the general funds of the treasury will be available for this distribution to farmers.

Protein Content of Southwestern Wheat

Protein tests of November wheat receipts at Kansas City showed 13.88% on 591 cars inspected by the Kansas State Department and 14.21% on 327 cars inspected by the Missouri State Department.

The 918 cars inspected by both departments averaged 13.99%, against 14.04% on 1,340 cars in October and 12.56% on 1,036 cars in November, 1935. For the crop year to date the Kansas department has inspected 11,403 cars, averaging 14.06% protein, as against 12.56% on 9,302 cars in the corresponding months of the previous crop year. The Missouri department has inspected 13,132 cars so far on the crop year, with an average of 13.44%, which compares with 12.575 cars and 12.20% a year ago.

The average protein of the 24,535 cars inspected by both departments for the first five months of the current crop year was 13.73%, against 12.35% on 21,877 cars a year ago. The average protein of Kansas City receipts for the season to date is not far below the record high average of 13.89% established for the first five months of 1934.

Grain and Feed Trade News

Reports of new firms, changes, deaths and failures; new elevators, feed mills, improvements, fires, casualties and accidents are solicited.

ARKANSAS

Huttig, Ark.—The Union Sawmill Co. early this month started operation of its new grist mill for making cornmeal.

CANADA

Whitford, Alta.—The Searle Grain Co.'s elevator burned Dec. 1; loss, \$16,000; insured.

Vancouver, B. C.—The following have been chosen to represent the grain division on the board of trustees of the Vancouver Merchants Exchange; Robert McKee, John Whittle, M. A. Ryan and D. W. Moss.

Ft. William, Ont.—While working at Pool 6 Elvtr., Dec. 5, George Wood was painfully burned about the face and hands while attempting to extinguish a can of oil that had ignited. He was removed to a hospital, where it was said the burns were not deep.

St. Boniface, Man.—McCabe Bros. Grain Co., Ltd. added a storage annex this summer to its Shamrock Elvtr. and feed plant here, bringing the total bulk capacity up to 130,000 bus. The feed and flour warehouses have a sacked goods capacity of about 40 carloads. Two five-ton trucks have also been added to the plant's equipment, an International and a GMC.

Victoria, B. C.—Lease of the Ogden Point grain elevator to Harvey Kavaner and associates as an operating company has been approved by the city council, the lease to run until May 31, 1952, rental to be \$1 per year to June 30, 1938, provided that 50% of all net income from operation of the elevator be paid to the city up to June 30, 1938, the rental after that date up to termination of the lease to be \$40,000 per year. The lease contains an option of purchase to be exercised within five years from date of lease.

Winnipeg, Man.—The Canadian Flax Ass'n, formed last May, held its first annual meeting in this city, at the Fort Garry Hotel, recently. The meeting was presided over by J. M. McCabe, pres. of the ass'n. A number of interesting papers were read by members on the growing of flax, the progress being made at the experimental farms in flax breeding and a summary of the flax fertilizer trials at the University of Manitoba. Two most interesting papers were read by Dr. W. F. Geddes and F. H. Leberg, of the Grain Research Laboratory, Board of Grain Commissioners, on the possibilities of grading flax by oil content and results of research work done in the laboratory on the oil content and iodine content of various grades of flax. Enthusiastic discussion followed these papers. The election of officers resulted in the re-election of Pres. McCabe, with E. N. Liersch as sec'y-treas. Vice-presidents from the six provinces represented in the ass'n, were chosen as follows: Dr. G. C. Moe, British Columbia; Dr. K. W. Neatby, Alberta; Dr. Manly Champlain, Saskatchewan; Robert Whiteman, Manitoba; Dr. G. P. McRostie, Ontario, and Dr. Paul Mathot, Quebec. Those elected to the various subcommittees at the organization meeting last spring were all re-elected.

COLORADO

Montrose, Colo.—The James Smidt Feed Store has installed a hammer mill and corn sheller.

Seibert, Colo.—Henry Daum will be the new manager of the Seibert Equity elevator, starting Jan. 14. E. M. Short, who has been the manager for the past 15 years, has been elected county judge and takes office on Jan. 14.—R. E. Harrington, with Geiger Grain Co.

ILLINOIS

Tuscola, Ill.—The Tuscola Co-op. Grain Co. has added a new Soweigh Heavy Duty Motor Truck Scale to its equipment.

Galva, Ill.—At the plant of the Farmers Co-op. Grain Co. a new lumber shed has been built.

Mendota, Ill.—A 20-ton Soweigh Heavy Duty Motor Truck Scale has been installed here by the Federal North Iowa Grain Elvtr.

Danvers, Ill.—M. Lander, manager of the Farmers Elvtr. Co.'s elevator, has resigned and taken a position with a trucking company.

Crystal Lake, Ill.—Cash amounting to \$93 was stolen from the safe of the McHenry County Farmers Co-op. Ass'n's elevator last month.

Quincy, Ill.—National Mills, Inc., whose principal business heretofore has been the crushing of soybeans, is adding dairy, hog, cattle and poultry feed to its business.

Fithian, Ill.—Sparks from the cob burner recently caused a fire in the driveway of the Farmers Elvtr. Co.'s elevator, but by quick action was extinguished before much damage was done.

Dekalb, Ill.—Cortland Grain & Lbr. Co., incorporated; capital stock, 50 shares p. v. common; incorporators: R. F. McCormick, D. E. Katz, J. G. Boyle, Jr.; to merchandise grain, feed, livestock, material, etc.

Nashville, Ill.—Wallace Huegely has purchased the properties of the Huegely Co-op. Elvtr. & Milling Co. and has assumed active management. He will also continue to operate the plant in Beaucoup, Ill. as in the past.

Morton, Ill.—The Farmers Co-op. Grain & Coal Co. has made some improvements recently, including installation of a new air hoist and building of a new 2,000-bu. corn crib, 24x26x25 feet. The company can now handle between 5,000 and 6,000 bus. of ear corn daily.

Grayville, Ill.—E. H. Morris, who purchased the mill and elevator plant of G. P. Bowman & Sons last summer, as reported in the Journals at the time, is continuing his improvements on the property. His main elevator, rebuilt from a former grain storage building, is about completed. It has been covered with metal and is equipped with the latest machinery for handling grain. The principal part of the Bowman elevator, at the southwest corner of that site, is being taken down. Mr. Morris has also rebuilt the warehouse on the north side of the block, cutting off the east end for construction of a modern office at the corner. The old flour mill has been painted.

E. W. BAILEY & CO.

Wishes You
Holiday
Greetings



May the
New Year be a
Winner

Commission Merchants

Grain, Seeds
Provisions

Depend on Bailey's Service in 1937

1142 Board of Trade
CHICAGO

Paw Paw, Ill.—The Paw Paw Co-op. Grain Co., operating here and at Roxbury, Ill., for the year ending Nov. 30, 1936, shows the following results: Grain sales 488,939 bus., gain \$15,059.85; merchandise sales \$49,610.32, gain \$3,634.94; total gross gain \$18,694.79; less expenses \$8,163.11; operating gain \$10,531.68. J. R. Reynolds has been manager for the past 13 years.

Pekin, Ill.—The Norris Grain Co., Chicago, has been awarded the properties once owned by the Turner-Hudnut Grain Co., but no announcement has as yet been made as to when they would be taken over. The properties include elevators at this point, Chillicothe, Henry and Hennepin, all located on the Illinois River, with some river equipment. The elevators have been idle all this season because of the bankruptcy of the Rosenbaum Grain Corp.

Princeton, Ill.—Forty operators of farmers' elevators of this district met here at the Clark Hotel the evening of Dec. 7, the meeting being in charge of Tony Torri, of Seatonville. The speakers of the evening were Lawrence Farlow, sec'y of the Farmers Grain Dealers Ass'n of Illinois, and Mr. Heiser, auditor of the same ass'n. Discussion centered on the effect on grain dealers of such legislation as the new social security act and unemployment insurance.

Kasbeer, Ill.—We have just completed the remodeling of our wood cribbed elevator, replacing the wood siding with corrugated steel, and have installed a modern high-speed ventilated elevating leg, with a 3-V belt drive and roller bearings thruout. This makes our entire plant roller bearing equipped. This new leg has a capacity of 2,800 bus. per hour, which, with our other elevator adjoining, gives us a total capacity of 4,600 to 4,800 bus. per hour.—J. H. Zink, mgr., Kasbeer Farmers Elvtr. Co.

CHICAGO NOTES

The annual meeting of the Board of Trade will be held Jan. 11, in Room 300, Board of Trade Bldg.

Board of Trade memberships are selling at \$5,000, which is an advance of \$500 over the last previous sale.

The Board of Trade will be open the Saturday following Christmas but the local curb exchange and the livestock markets will observe a triple holiday over Christmas.

By vote of the membership of the Board of Trade recently, 14 amendments to the rules of the exchange (which were given on page 422 of the Nov. 25 Journals) were adopted.

New members of the Board of Trade include Edward J. Grimes, vice-pres. of Cargill, Inc.; Mortimer J. Swafford, of Chicago; Edward H. Mirick, Minneapolis. Memberships transferred: I. W. Burnham II, George B. Brunton, James C. O'Neill, John C. Watson, William A. Larsen. Estate of William P. Anderson, Estate of Harry H. Whiting. New Firm: H. E. Cox & Co., of Iowa. Retired from partnership: Edward Paul of Paul, Robson & Co., New York. Changes in registration of members: Howard E. Cox, registered for H. E. Cox & Co. of Iowa (was registered for H. E. Cox & Co., Chicago); Thomas B. Phillips, registered for own account (was registered for H. E. Cox & Co., Chicago). Re-instated from sentence of suspension: Orphy Friedman.

Petitions for nominations have been received as follows by the sec'y of the Board of Trade: For pres., Kenneth S. Templeton; vice-pres., Barnett Faroll and Orrin S. Dowse; for directors: Philip Ray O'Brien, John E. Brennan, John H. Watson, David H. Annan, Philip C. Sayles, John J. Coffman, James E. Bennett, David Howard Lipsey, William M. Hommerding, John J. Murphy (later withdrawn), John J. Bittel, Harry C. Schaeck; com'te of appeals: Frank J. Bittel, Alex. Moore, John H. Wheeler, Alfred A. Meyer, Edwin J. Kuh Jr.; com'te of arbitration: James S. Schonberg, Philip A. Copenhagen, Frank Haines, Earle M. Combs, Jr., George H. Phillips, George W. Altorfer, Raymond A. Gerstenberg. The annual election will be held Jan. 4.

Edwin J. Noble, a former member of the Chicago Board of Trade, also former chief state grain inspector, died at his home in Kankakee (to which city he moved from Chicago 14 years ago) Dec. 14, at the age of 86 years. Mr. Noble came to Chicago in 1876 and entered the grain business. In 1889 he was elected alderman of the old 31st Ward. J. A. Noble, now chief of the Board of Trade Grain Sampling Department, is not related to the deceased, altho he was in the employ of the state when Noble was chief.

INDIANA

Daleville, Ind.—R. H. Dashler has installed a Blue Streak Hammer Mill.

Fillmore, Ind.—Alonzo A. Smith is building a new elevator and feed mill here.

LaCrosse, Ind.—Gerner Phegley is erecting a grain elevator here. He will handle coal also.

Francesville, Ind.—The Co-op. Elvtr. Co., Inc., has improved its equipment by installing a new sheller and motor.

Garrett, Ind.—The Stump Grain & Coal Co. has purchased a new Soweigh Heavy Duty Motor Truck Scale.

Russellville, Ind.—Charles Webster has completed the remodeling and painting of his elevator and mill property.

Waterloo, Ind.—The R. C. Fretz Feed Co. recently installed new machinery in its feed mill, doubling its former capacity.

Wyatt, Ind.—Wyatt Grain Co. is using the 1-ton Sidney Kwik-Mix which it purchased from the Sidney Grain Mchry. Co.

Mt. Vernon, Ind.—The Posey County Farm Co-op. Ass'n has installed a half-ton feed mixer which is operated by electricity.

Portland, Ind.—Sider & Teegarden have installed a Sidney Special Mixer recently purchased from the Sidney Grain Mchry. Co.

Huntington, Ind.—George L. King, 78, for many years engaged in the grain business is dead. Burial took place at Markle, Ind.—W. B. C.

Chalmers, Ind.—Hardware has been added as a sideline by the Farmers Elvtr. Co. Repairs were recently made to the drier and a new motor installed.

Knox, Ind.—The former Farmers Co-op. Co.'s plant is now being operated as the Farmers Seed & Coal Co. by Harry O. Jorden, who recently bot the property. Clarence Fell is his assistant.

Hamlet, Ind.—The Hamlet Grain & Feed Co.'s plant that burned recently, as reported in the Nov. 25 Journals, is being reconstructed. The work will probably not be entirely completed until spring, it is reported.

Cutler, Ind.—Clyde Jones, former manager of the Battle Ground, Ind., elevator of the Crabbs-Reynolds-Taylor Co., has been appointed manager of the Cutler Co-op. Elvtr. Co.'s elevator, succeeding Orth Quinn, recently resigned.

Mexico, Ind.—The office building of the Farmers Elvtr. Co. has been increased to three times its former size, to permit display space for merchandise handled by the company. A basement and an upper story were added, also.

Delphi, Ind.—Funeral services were held here in the Methodist Church on Dec. 3 for William E. Brown, age 73 years, who operated a grain elevator at Ockley, Ind., many years, moving to Delphi 17 years ago and continuing in the elevator business until his health failed.

Evansville, Ind.—In addition to the usual Christmas bonus, Mead Johnson & Sons, of this city, gave another bonus, it was announced on Dec. 17. The company has given a Christmas bonus every year for the past 15 years. The regular bonus, amounting to about \$25,000 to 500 employees, is based on the length of service. The special bonus, the first in the company's history, is based upon the length of service and average annual earnings for the period employed.—W. B. C.

Indianapolis, Ind.—Bert A. Boyd, altho still an invalid and confined to P. O. Box 13, Hendersonville, N. C., is up to his old tricks and surprising his many friends in the trade with a flying Santa Claus mailed at Santa Claus, Ind.

Indianapolis, Ind.—The Indiana Grain Dealers Ass'n will hold its 36th annual convention in the library of the Indianapolis Board of Trade on Jan. 20 and 21. The banquet on the evening of Jan. 21 will be held in the ballroom of the Columbia Club, near the Board of Trade Bldg. A strong and interesting program is being arranged.

Winamac, Ind.—The Co-op. Elvtr. Co. had a narrow escape from explosion and fire on Dec. 7. While grinding oats in the hammer mill, sulphur was dribbled on the oats before grinding, for mixture. Suddenly the metal feed spout turned red hot. It is assumed that a small nail or other metal got into the mill and ignited the sulphur. No serious fire damage resulted.—L.

Elevators which are planning to furnish screenings as feed for the quail during the severe winter months are the Farmers Elvtr. Co. and the Mayer Grain Co., both of South Whitley; the Raber Co-op. Co., of Raber; the Farmers Mill & Elvtr. Co. and the Columbia Grain Co., both of Columbia City, and the Steifel Grain Co., Kimmel. Many quail perished last winter for lack of feed.

Van Buren, Ind.—Our recent improvements include re-arranging our office building to give us a display room large enough to carry large samples of feeds and seeds, feeding charts, etc. We have painted the elevator, office, warehouse and coal sheds with aluminum paint, and have installed a new type hammer mill, larger sheller and mixer to take care of increasing business. Looks like a busy year ahead.—Farmers Co-op. Equity Exchange.

IOWA

Des Moines, Ia.—A new molasses mixer, heated by electricity, is being installed by Sargent & Co., feed manufacturers.

Morrison, Ia.—The Farmers Co-op. Elvtr. Co.'s directors have declared a 10% dividend for this year. H. R. Stock is manager.—Art Torkelson.

Astor, Ia.—The elevator of O. A. Olson, who died last summer, has been sold to W. K. Hall, of Cresco, Ia. Mr. Olson and his wife settled in Astor in 1887.

Greene, Ia.—Two new wings have been built on the feed mill and hatchery of Albrecht Bros. The company has moved its feed storage from an outside building to the feed mill wing.

Whitemore, Ia.—D. Ault, manager of the Whitemore Elvtr. Co.'s elevator for the past 15 years, has resigned, to take effect at any time between Jan. 1 and Mar. 1. Mr. Ault states that he is not in the best of health and wishes to retire.

Waterloo, Ia.—The Waterloo & Cedar Falls Union Mill Co., at one time said to be the largest manufacturer of flour in this state, was officially discontinued at a meeting of stockholders recently when dissolution of the corporation was voted.

Cameron (Mason City p. o.), Ia.—Fire broke out at about 3 p. m., Dec. 15, at the roof of the Rockwell Co-op. Elvtr. Ass'n's elevator, thot to have started in the chimney and heater in a corner of the office. A hastily formed bucket brigade extinguished the fire before it reached the grain bins, confining it to the interior of the office and the roof of the scale house and office. Damage was covered by insurance.

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Future Orders Solicited

Cedar Rapids, Ia.—Penick & Ford, Inc., maker of corn products, with plants here, at New Orleans, Montgomery, Ala., and Burlington, Vt., has declared a dividend of 75 cents a share on common stock, payable Dec. 24 to holders of record Dec. 11.

Scranton, Ia.—The Farmers Elevator Co. has appointed J. A. Seward, manager of the Farmers Elevator Co.'s elevator at George, Ia., for the two past years, manager of its elevator, succeeding Gayle Snedecor. Mr. Seward and family will move to Scranton about the first of the year.

Sioux City, Ia.—Harry S. Nevileir, 60 years of age, a former vice-pres. of the Sioux City Grain Exchange, died Dec. 5 at his home here, after a brief illness. Mr. Nevileir, who was a broker here for a number of years, has been out of the grain business for several years.—Art Torkelson.

LaPorte City, Ia.—W. W. Milne, who has been in the grain business for the last 27 years, has sold his three elevators to L. L. Froning, of Garrison, who with other members of the Froning family operates several elevators in surrounding territory. Mr. Froning will move to LaPorte and take possession Jan. 1.

Pierson, Ia.—In the new 40,000-bu. elevator of the Farmers Co-op. Elevator Co., which recently started operation, the equipment included a Carter Disc-Cylinder Separator and a Hart Uni-flow Grain Grader, which is used for grading barley by width, both of which are the latest machines of their kind made by the Hart-Carter Co.

Cresco, Ia.—The Hunting Elevator Co. has recently awarded a contract to the Hogenson Const. Co. for the erection of a feed mill in connection with the elevator, warehouse and coal shed it recently completed for this company. In addition to the 20,000-bu. elevator a warehouse 26x40 and a six-bin coal shed have been built. The elevator is of cribbed construction with 12 bins covered with 26-inch gauge corrugated elevator plates and standing seam roofing. The feed mill will be equipped with huller double attrition mill and a corn cracker, crusher and sheller. It was expected that work would be completed about Dec. 20.

KANSAS

Delphos, Kan.—Lord Grain Co. suffered wind-storm damage recently.

Clayton, Kan.—The Robinson Elevator Co. sustained wind damage on Nov. 25.

Gypsum City, Kan.—The Teichgraber Milling Co.'s plant was damaged by wind last month.

St. John, Kan.—The Kansas Milling Co. sustained damage to its electrical equipment on Dec. 4.

Sublette, Kan.—A feed storage warehouse is under construction here for the Co-op. Grain Dealers Union.

Moundridge, Kan.—The Moundridge Milling Co. sustained damage to its electrical equipment recently.

Junction City, Kan.—Fire of unknown origin damaged the mill plant of the Hart-Bartlett-Sturtevant Grain Co. on Nov. 27.

Elkhart, Kan.—Leo J. O'Toole, former manager of the Stevens County Co-op. Exchange, Feterita, Kan., has taken the management of the Elkhart Co-op. Exchange elevator.

Dodge City, Kan.—New members of the Kansas Grain, Feed & Seed Dealers Ass'n are as follows: Farmers Mill & Elevator Co., Concordia; Onaga Lbr. & Grain Co., Onaga; Farmers Union Co-op. Ass'n, Maple Hill; Glasco Milling Co., Glasco.

Hutchinson, Kan.—The annual Christmas celebration of the Hutchinson Board of Trade was held on the floor of the exchange the night of Dec. 17, when members exchanged gifts and a buffet supper was served, consisting of turkey and the usual trimmings.

Monmouth, Kan.—Gerald Simmons, formerly employed at the Crawford County Farmers Union Co-op. Ass'n's elevator at McCune, Kan., has been made manager of the ass'n's elevator at this point, succeeding Abe Moore, who has been manager of the local elevator for several years.

Lacygne, Kan.—C. E. Clark, for several years past manager of the Morrison-Gregg-Mitchell Grain Co.'s local elevator, has bot C. T. Potter's warehouse, which he will move a short distance north, have it put on a solid foundation and put in first-class condition. He plans to use it as a storeroom for grain, feed and flour in the near future.

Penokee, Kan.—Machinery being installed in the new 20,000-bu. elevator, reported in the Oct. 14 Journals as under construction for the Penokee Farmers Union Co-op. Ass'n by Ben Munson & Sons, replacing the fire loss of last July, includes an 8-bu. Richardson Automatic Scale, Ehrsam Head Drive, driven by a 10-h.p. totally enclosed and fan cooled single phase motor and an overhead truck lift. A Palmer Dust Cleaner will also be installed.

Pratt, Kan.—J. H. Magruder & Son, which name was changed last year to the Pratt Grain & Supply Co., have sold their business to T. F. Montford, who will operate as the Montford Grain & Supply Co. B. G. Lathrop, who is in charge of the elevator now, is quoted as saying that the firm for the present at least will not engage in the grain buying business. The Magruder firm is one of the oldest grain firms in Pratt County, having been in business for over 25 years.

KENTUCKY

Shelbyville, Ky.—Climax Roller Mills plant was damaged by wind last month.

Lancaster, Ky.—In a full night's work done by thieves in this vicinity, Dec. 2, the Lancaster Milling Co. lost a \$150 adding machine.—A. W. W.

Louisville, Ky.—A. B. Collins will continue as an individual the business formerly conducted by the grain, seed, feed and hay firm of C. L. Jewell & Son, a corporation, which has been dissolved. Following the death of his father-in-law, C. L. Jewell, several years ago, Mr. Collins became pres. of the company.

MICHIGAN

Armada, Mich.—The Armada Elevator Co. has purchased the interest of T. E. Neely & Co. in the Armada Flouring Mills, which the new owner will open soon. The grist mill at the elevator site will be discontinued.

Chesaning, Mich.—The Farmers Elevator Co. began operation of its new elevator the second week of December. This replaces the company's fire loss of last summer, previously reported. Philip Carson is manager of the elevator.

Perrinton, Mich.—Thieves broke into the elevator of the Perrinton Elevator Co. during the night of Dec. 7 and got away with 17 bags of beans, weighing 1,700 pounds, including 11 bags that had been hand-picked. Entrance to the elevator was gained thru a window.

Gladstone, Mich.—The work of wrecking the old Soo Line Transfer Elevator, begun last June, was completed Dec. 1. The last boatload of grain was taken from the elevator in 1933 and the Cargill Grain Co. (now Cargill, Inc.), owners, decided to take down the building because of the high cost of upkeep. The house was built in 1892 by the Green Bay & Minneapolis Elevator Co., and was Gladstone's oldest landmark. It was built of 2x6 pine planks laid flat against each other, was covered with sheet-iron and had a stone foundation. The capacity of the elevator was 452,000 bus.

Ubyly, Mich.—Joseph Block's elevator burned at 7 a. m., Sunday, Dec. 13; loss, approximately \$38,000; loss partly covered by insurance, including a blanket policy on grain. The elevator contained 350,000 pounds of beans, 1,700 bus. of wheat and clover seed, rye, oats and barley. The elevator had only recently been equipped with new machinery at a cost of \$9,000. Because of an unusually large volume of business, the elevator had been working on a 24-hour a day basis, with three shifts. The safe, with its records intact, was removed from the office undamaged. A freight car partly loaded with beans on a siding near the elevator was also burned. Fortunately, the wind was blowing in the right direction to keep the flames from the large elevator of the Bad Axe Grain Co. less than 100 feet distant from the Block elevator.

MINNESOTA

Littlefork, Minn.—Chris Christianson has reopened his feed mill at this point.

Glenwood, Minn.—Wallace Ogdahl has purchased the Glenwood Mill, owned and operated for the past 12 years by George W. Hughes.

Bemidji, Minn.—The Farm Bureau Service Co. is moving its machinery, feed and flour into its new brick addition that provides 6,750 square feet of floor space.

Red Wing, Minn.—The Froedtert Grain & Maltng Co. has improved its grain receiving equipment with the addition of a Howell Electric Traveling Overhead Truck Lift.

Minneapolis, Minn.—Paul Kingsley, manager of the Commander Larabee Milling Co.'s feed department, is reported as well on the road to recovery following a recent operation for appendicitis.

Kerkhoven, Minn.—We are contemplating building a modern feed plant. The installation will include attrition grinder, hammer mill, mixer, corn cutter, oat huller, seed cleaner and molasses mixer.—Kerkhoven Farmers Elevator Co., G. H. Homme, mgr.

Dovray, Minn.—The Klevan-Erickson Grain Co. is the name under which the former Farmers Elevator Co.'s elevator will be operated by Ed Klevan and Thomas Masterson, reported in the Journals last number as having recently bot the plant.

Spicer, Minn.—The Green Lake Grain & Seed Co. is making major improvements in its elevator, including a Winters Truck Dump, 15-ton Fairbanks Dump Scale, new Howell Sectional Dump Grates, and a high-speed, large capacity leg. The equipment was purchased thru R. R. Howell & Co. Fred Douglas, of Grand Forks, is making the installation.

Essig, Minn.—The 15,000-bu. grain elevator of the Eagle Roller Mill Co. at this point burned Nov. 24, with a loss estimated at about \$15,000; covered by insurance. The elevator will not be rebuilt. About 6,000 bus. of grain, including wheat, oats, rye, barley, corn and flax, also seed grain, flour and equipment were destroyed. The fire originated near the chimney.

Garfield, Minn.—The Hogenson Const. Co. recently completed an elevator replacing the fire loss of last summer and made extensive repairs and improvements in the feed mill plant of the Farmers Elevator Co. The elevator is constructed with 13 bins all overhead, of cribbed construction and covered with galvanized elevator plates and standing seam roofing. The feed mill, which is located in an existing warehouse, has been raised to include grain and feed bins and a new attrition mill and feed mixer have also been installed.

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Minneapolis, Minn.—After suffering for years from a nervous trouble, recently diagnosed as a tumor on the brain, John W. Robinson, with the wheat department of the International Milling Co., of this city, for many years, until his retirement a year ago on account of his health, took his own life by shooting, on his ranch near Livingston, Mont., Dec. 4. Mr. Robinson was only 49 years of age, and is survived by his widow and one daughter.

DULUTH LETTER

F. E. Lindahl, vice-pres. and Duluth manager of Cargill, Inc., accompanied by his wife, left recently for Florida.—F. G. C.

G. H. Spencer, pres. of the Consolidated Elvtr. Co., returned last week from attending the annual meeting of the company in New York City.—F. G. C.

E. W. Berreau, of the Duluth office of William Dalrymple, has been transferred to Minneapolis and will leave with his family in a short time to make his home there. He has been elected a member of the Minneapolis Chamber of Commerce.—F. G. C.

Grain is being moved out of Duluth-Superior elevators in a steady and heavy volume. Car loading and rail shipping is expected to continue on an active scale thruout the winter. Outside mills and feeders are owners of considerable grain which they will be needing in the near future. Recently a 10,000-bu. lot of Canadian barley was loaded and sent to Mexico.—F. G. C.

A complete shutdown of interlake shipping was completed Dec. 9 for the year. The last boat departure for lower lake ports was on Dec. 5 and final arrival, Dec. 9. Records show a smaller volume of grain was moved out of this port than in the previous year, the result of crop shortage and handling. The Soo canal closed officially Dec. 15. A number of vessels are wintering here, among them four holding 572,197 bus. of Canadian barley for storage, until owners desire their unloading.—F. G. C.

MISSOURI

Clinton, Mo.—Commander-Larabee Milling Co. sustained wind damage on Nov. 25.

St. Louis, Mo.—The St. Louis Grain Club held its annual meeting at the Statler Hotel on Dec. 15.

Aurora, Mo.—The old Planet Flour Mill, which has not operated as a mill for 15 years, burned recently.

St. Louis, Mo.—Fire of unknown origin destroyed a shed and 1,000 bales of hay in the rear of the feed mill building of John C. Roever, Inc., on Nov. 30.

St. Louis, Mo.—Directors of the St. Louis Merchants Exchange have chosen the following nominating com'te: Woodson K. Woods, chairman; Harry F. Beckmann, Eugene C. Dreyer, Paul M. Marshall and Turner B. Morton. The election will be held Jan. 13.

Mexico, Mo.—The William Pollock Milling & Elvtr. Co. has completely overhauled its plant, recent improvements including new belting and elevator cups, screens and cleaning machinery, new equipment in the mill, painting and repairing of all buildings and additional office equipment.

Bonne Terre, Mo.—Investigation of the gas heater after the burning of Moran Bros. mill and elevator disclosed that the air intake valve was improperly adjusted and that the wrong coupling had been used in connecting the pipes. A careful inspection of the heating equipment before the fire might have saved the plant.

KANSAS CITY LETTER

Kansas City, Kan.—Robert Lieurance, 50 years of age, prominent grain man, died at his home Dec. 1 after a lingering illness.

Nominees for officers of the Kansas City Board of Trade for 1937 have been chosen as follows: Pres., D. C. Bishop and George D. Haynes; E. F. Emmons, present second vice-pres., automatically becomes first vice-pres.; for second vice-pres., E. C. Meservey, Jr., and R. A. Kelly. Nominees for directors, six to be chosen, are: R. M. Pease, E. H. Reed, George L. Davis, E. E. Klecan, John Stark, G. F. Hilts, L. C. Worth, W. H. Izzard, R. H. Sturtevant, E. M. Jolley, J. H. Martin, F. W. Lake. Nominees for the arbitration com'te, five to be elected, include: P. G. Hale, S. G. Cronin, Edmund Marshall, W. D. Farmer, W. M. Neil, L. J. Byrne, Jr., Warren E. Root, E. A. Hogan, M. L. Gear, R. E. Larson. The election will be held Jan. 5.

The Mid-Continent Grain Co. has moved its offices from the sixth to the seventh floor of the Board of Trade Bldg., where it has larger quarters, the move being made necessary by increased business.

Nutrena Mills, Inc., are installing machinery in the former Hoyland flour blending plant, which they have leased, in the east bottoms district, and which will be converted into a poultry feed manufacturing unit, with a capacity of 200 tons per day. The plant is expected to be ready to operate by the first of the year.

MONTANA

Glasgow, Mont.—Flour stock of the Montana Flour Mills Co. stored in the warehouse owned by the Northern Montana Alfalfa Growers Ass'n was totally destroyed by fire of unknown cause on Dec. 7.

NEW ENGLAND

Danbury, Conn.—A new building, 60x100 feet, one story high, will be erected by the Big Y Feed Co. on White St.

Boston, Mass.—Robert G. MacDonald, 62 years of age, proprietor of the MacDonald Elvtr. Co., this city, died Nov. 28, from pneumonia. Mr. MacDonald was a native of Nova Scotia and had lived in Boston for 20 years.

Boston, Mass.—Applicants for membership in the Boston Grain & Flour Exchange include Dean K. Webster, Jr., grain and feed dealer of Lawrence, Mass., who will represent the H. K. Webster Co. on the exchange.

Boston, Mass.—The Old Grist Mill, used for manufacturing dog food and owned by Potter & Worthington, Inc., burned Dec. 5; loss, about \$300,000, including building, equipment and products. The fire swept the Hoosac Docks, in the Charlestown district, causing a total loss of approximately \$1,000,000.

NEW MEXICO

Portales, N. M.—Worley Bros. have purchased the Farmers Elvtr. Co.'s elevator here and are erecting a flour mill. Machinery for manufacturing a complete line of poultry and stock feeds is also being installed. It is expected to have the plant ready for operation by Feb. 1. The new firm will be known as the Portales Milling Co.

NEBRASKA

Orleans, Neb.—Robert Ott, of Naponee, has leased the Orleans Equity Exchange elevator and will operate it in the future. His son, Elmer, will have charge.

Beatrice, Neb.—A recent wreck on the railroad spilled shelled corn all over the tracks. Farmers were glad to help the railroad clean up the corn.—R. E. Harrington.

Rockford, Neb.—Work of rebuilding the feed mill of the Rockford Grain Co. that burned recently, as reported in the Dec. 9 Journals, is in progress. The elevator did not burn.

Valparaiso, Neb.—E. J. Haynes, manager of the Valparaiso Grain & Lbr. Co.'s elevator, shipped in a carload of corn late in November for the first time in the 28 years he has been manager of the elevator.

Ericson, Neb.—Robbers took \$325 from two local elevators during the night of Dec. 16. The safe combination was broken at one of the places but at the other the thieves worked the combination to open the safe.

Rockford, Neb.—Fire badly damaged the old mill here, which was used for feed grinding. The building will be wrecked and a feed unit added to the Russell elevator on the railroad tracks.—R. E. Harrington, with Geiger Grain Co.

Sterling, Neb.—The Farmers Co-op. Ass'n has purchased the elevator in which it has been conducting a grain buying business for the past two years. Fred Panko, of Cook, Neb., owned the house. Some improvements are planned by the new owners.

The Nebraska elevators formerly owned and operated by the Nye-Jenks Grain Co. and recently purchased by the Updike Grain Corp. (whose headquarters are at Omaha, Neb.) are as follows, together with the capacity of each and the name of the local manager: Fremont, William Hansen, 165,000 bus.; Cedar Bluffs, P. H. Seeberg, 47,000 bus.; Bruno, V. A. Proskovec, 50,000 bus.; Cornlea, Otto Warth, 35,000 bus.; Lindsay, William Warth, two houses, one having a capacity of 65,000 bus. and the other 20,000 bus.

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Resolutions? Yes! Why
not? No man ever did his
best. And nature sells us
everything for the price of
an effort. So have courage
— don't worry — be an opti-
mist — thrifty — enthusi-
astic — get the missionary
spirit — it's a new era —
economic and spiritual. So
here's to Happy Days — and
a Wonderful New Year!

LOWELL HOIT & CO.

Faulkner, Neb.—The Farmers Grain Co. has been taken over by the Faulkner Grain Co., Belz Bros. owners, which operates elevators at Conrad and at Thornton. Max Belz, son and nephew of the new owners, will manage the local business, which will consist of the handling of grain, feed and coal.

NEW YORK

Cuba, N. Y.—The Phelps & Sibley Co., Inc., sustained slight damage from sprinkler leakage on Dec. 7.

Collins, N. Y.—The elevator and contents of the James H. Gray Milling Co., Inc., was destroyed on Dec. 5 by fire of incendiary origin.

Lowville, N. Y.—The feed mill of C. H. Nohle, Inc., was damaged by fire which originated in the cupola, caused either by an elevator head or a motor, on Dec. 1.

New York, N. Y.—We are indebted to W. C. Rossman, sec'y of the New York Produce Exchange, for a copy of the list of members and associate members of that exchange.

Buffalo, N. Y.—Otto Tantz, vice-pres. and manager of the grain and feed departments of the Co-op. Grange League Federation, has resigned to take a long vacation in California.

Buffalo, N. Y.—Corn Exchange members are planning a big Christmas party for Dec. 26, if the market is open that day, otherwise on Dec. 29. The festivities will include music, luncheon and the usual fun.

New York, N. Y.—Applicants for membership in the Produce Exchange include C. G. Ireys, Jr., who is associated with the American Elvtr. Co., having recently been transferred from Buffalo to New York, where the company is opening an office.

NORTH DAKOTA

Selfridge, N. D.—The Equity Exchange has constructed a new feed house here.

Kief, N. D.—Kellogg Commission Co. sustained wind damage last month.

Kelso, N. D.—The plant of the Equity Elvtr. & Trading Co. was wind damaged Nov. 24.

Colgate, N. D.—William Whipple, 65 years of age, local grain buyer, died Dec. 5, in a Fargo hospital.

Mylo, N. D.—The Osborne-McMillan Grain Co.'s elevator and the Atlantic Elvtr. burned recently. The former company will rebuild in the spring.

Williston, N. D.—The Farmers Union Co-op. Ass'n's elevator and feed mill, built last summer at a cost of \$16,000, burned this month. The feed mill will be rebuilt immediately.

Grand Forks, N. D.—The recent Northwest Grain Ass'n election resulted as follows: Pres., A. M. Thompson, of Cogswell; vice-pres., John W. Evans, Montevideo, Minn.; sec'y and manager, G. W. Connell, Minneapolis, Minn.

Harwood, N. D.—Charles H. Hancock, who came here in 1882 and became a grain buyer here, at Argusville and at Prosper, N. D., and Hendrum, Minn., died at Fargo Dec. 3, from heart disease. Mr. Hancock, who was 77 years of age, moved to Fargo about 10 years ago.

Grandin, N. D.—The Farmers Co-op. Elvtr. Co.'s elevator and approximately 40,000 bus. of grain burned at 9:30 p. m., Dec. 3; loss, estimated at \$60,000; covered by insurance. The house had a capacity of 93,000 bus. The fire was believed to have been started by sparks from a locomotive. The elevator will probably be rebuilt.

Valley City, N. D.—The Hogenson Const. Co. has recently completed an extensive remodeling job on the existing feed plants of the Occident Elvtr. Co. here. This job included the installation of a one-ton Strong-Scott Feed Mixer, molasses mixing unit and invincible feed packer, together with complete facilities for producing prepared feed of all kinds in large quantities. This work was done in connection with the downtown plant in Valley City, of which P. M. Thompson is the manager.

Gladstone, N. D.—The Farmers Union Elvtr. Co. awarded a contract for the construction of a 35,000-bu. elevator to the Hogenson Const. Co. Work on this job was started on Dec. 10. The new elevator will be built on re-inforced concrete slab foundation of cribbed construction and divided into 14 bins, 6 of which will be deep-bottom bins, 6 overhead and 2 hanging bins. The elevator together with warehouse and office will be covered with galvanized elevator plates and standing seam roofing. There will be two stands of elevator legs driven by totally-enclosed Fairbanks-Morse Motors and Strong-Scott Head Drives, a 20-ton, 26x9 Fairbanks Pipe Lever Type Scale and a 10-bus. Richardson Automatic Shipping Scale. John Loh, manager, states that he expects to have this work completed in the latter part of February.

OHIO

Middlefield, O.—A 50x40-foot addition, one story high, is being built to R. L. Fritinger's mill.

Leipsic, O.—Gallup-Prentiss Co., has installed a No. 1 regular sheller purchased from the Sidney Grain Mch'y. Co.

Risingsun, O.—Burglars forced an entrance into the office of the Sun Grain Co.'s elevator during the night of Dec. 3, but were forced to leave empty-handed when they could not open the safe.

Troy, O.—Mrs. Alma F. Petry, widow of C. S. Petry, former owner and operator of the Troy Grain & Supply Co., died on Dec. 6, at the age of 62 years, her death following that of Mr. Petry only 13 weeks later.

Belleville, O.—Farm Bureau Co-op. Ass'n has installed at its plant an Ajax Hammer Mill, a mill sheller, a one-ton Kwik-Mix, a Sidney Crusher, two elevators, motors, and miscellaneous equipment, all furnished by the Sidney Grain Mch'y. Co.

Mortimer (Findlay p. o.), O.—It is reported now that the North Baltimore Grain Co. will probably rebuild its burned elevator next spring. In the meantime, the grain buying formerly handled at this station will be handled by the company's North Baltimore, O., elevator.

Toledo, O.—Harold Anderson, vice-pres. and general manager of the National Milling Co. for 17 years, has announced his resignation, effective Mar. 1, and will enter another business. The company, now a part of the National Biscuit Co., was founded by Mr. Anderson's father, David Anderson, and associates.

Lindsey, O.—The financial report of the Farmers Merc. & Elvtr. Co. for the fiscal year ending Nov. 21, 1936, shows the best year since the organization of the company. Sales were as follows: Corn \$139,597.12, wheat \$87,804.70, oats \$42,412.77; livestock, \$37,945.05, merchandise, \$21,645.38, gasoline and kerosene, \$20,847.14, coal, \$17,648.07, clover seed, \$15,239.84, fertilizer, \$10,166.94, hay and straw, \$5,297.33, wool, \$3,654.72, oil and grease, \$1,784.82, total sales \$404,043.88, income from grinding \$946.52, gross operating profit \$35,150.34.

Jefferson, O.—The local plant of the Lake Erie Milling Co. has been taken over by the Ashtabula County Farm Buro Co-op. Ass'n, which is now operating it.

PACIFIC NORTHWEST

St. John, Wash.—Fire originating in a roller mill slightly damaged the property of the Inland Empire Milling Co. on Dec. 3.

Davenport, Wash.—Grange Milling Co., incorporated; non-profit; incorporators: Ervin E. King, Fred W. Lewis, Frank L. Koontz and others; to mill flour and feeds.

Canby, Ore.—The Mulino Feed & Flour Co-op. has bot the Randall Feed Co.'s plant here, formerly operated by B. M. Randall, who sold on account of his health.

Mabton, Wash.—The sheriff was scheduled to sell the Mabton elevator to the highest bidder at auction on Dec. 12. The building is on railroad property and is being sold for personal property taxes.

Bellingham, Wash.—Cashier J. Deming and W. E. Breakey, warehouseman of the Albers Bros. Milling Co., were forced by bandits to open the safe late Dec. 18. About \$200 cash and \$700 in checks were secured by robbers, who made a successful getaway.—F. K. H.

Waitsburg, Wash.—Edgar Leonard died in his sleep Dec. 6, after retiring the previous night in apparent good health. For the past year he has conducted a grain brokerage business for himself, previous to which time he was associated with the Preston-Shaffer Milling Co., of which his father, E. H. Leonard, is president. His widow and a son survive him.

SOUTH DAKOTA

Stockholm, S. D.—The Farmers Elvtr. Co. contemplates adding an oil and gas business.

Rapid City, S. D.—James L. Felix is now manager of the office of the Burke Grain Co., brokers, succeeding Ward Clarke.

Tripp, S. D.—The Farmers Elvtr. Co. has appointed George H. Oberembt, of Dimock, S. D., manager of its elevator.

Canistota, S. D.—The McCook County Grain Co.'s elevator has been purchased by Albert P. Meyers, of Sioux City, Ia.

Burke, S. D.—The Updike Grain Corp., of Omaha, Neb., has purchased the former Nye-Jenks Grain Co.'s 35,000-bu. elevator at this point, and put John Smizer in charge locally.

St. Charles, S. D.—The 50,000-bu. elevator formerly owned by the Nye-Jenks Grain Co. is now the property of the Updike Grain Corp., which has appointed Ambrose Burke local manager.

Bushnell, S. D.—Burglars broke into the George P. Sexauer & Sons elevator this month and stole \$140 worth of feed and tools, valued at \$20 and belonging to the manager, Herman Hanson.

Mitchell, S. D.—The Farmers Grain & Coal Co. has opened an up-town office in the King Bldg. for the convenience of patrons, who will not have to go the longer distance to the elevator now.

Aberdeen, S. D.—C. G. Anderson, former manager of the Farmers Equity Exchange's elevator, resigned recently and has gone into business on his own account under the name of the Anderson Fuel Co.

Rapid City, S. D.—Warehouse No. 1 of the Tri-State Milling Co. burned Nov. 29; loss estimated at \$15,000. The fire was caused by a gas furnace. The warehouse will be rebuilt in the near future.

Sioux Falls, S. D.—A barley school will be conducted here Jan. 6, 7 and 8, announces H. R. Sumner, Minneapolis, executive sec'y of the Northwest Crop Improvement Ass'n. Attendance will be on invitation to local grain buyers in territory tributary to Sioux Falls. A special meeting will follow on the 9th, when farmers will bring in barley samples for examination and grading. This is the last of a group of three meetings arranged to acquaint buyers with the special problems involved in buying malting barley. The previous meetings were held at Mankato, Minn., and at Fargo, N. D.

SOUTHEAST

Charlotte, N. C.—A \$3,000 warehouse is under construction for the Piedmont Feed Mills here.

Spartanburg, S. C.—City Feed Co., incorporated; capital stock, \$5,000; incorporators: James Brown, pres. and treas., and Anna J. Brown, sec'y.

Birmingham, Ala.—Charles A. Jones, head of the grain, feed and flour brokerage firm of Charles A. Jones & Co., died recently. Mr. Jones, who was 65 years of age, was a member of the Birmingham Grain Exchange.

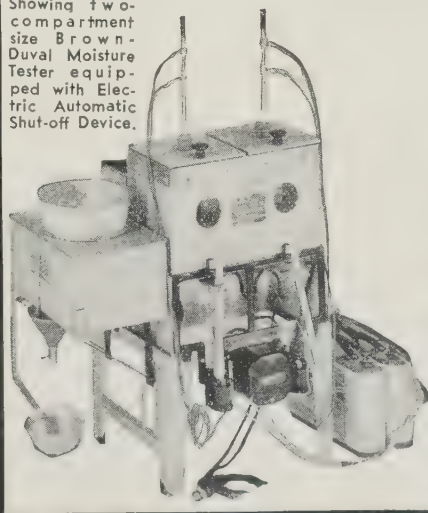
Norfolk, Va.—The Davis Milling Co.'s feed plant was damaged by fire during the night of Dec. 5; loss, \$40,000; mostly covered by insurance. The grain elevator, the main building of the feed plant and a new warehouse addition were almost totally destroyed. Rebuilding is planned.

Norfolk, Va.—A flour mill having a daily capacity of approximately 1,200 barrels, the first flour mill in this city for over a quarter of a century, will be opened by the Shenandoah Milling Co., which operates mills in Shenandoah, Va., and Hampstead, Md., when remodeling of the plant formerly owned by the Chesapeake Knitting Mills, recently purchased by the Shenandoah Co., is completed. About 60 persons will be employed at the mill when in operation.

TENNESSEE

Memphis, Tenn.—The Port of Memphis Public Elvtr., capacity 1,500,000 bus., was completed and turned over to Cargill, Inc., lessor, early this month. The elevator is equipped with a marine leg for unloading barges. The barge machinery is not expected to be used until March, as ice has closed river ports in the grain belt. While public use of the elevator has been delayed, Cargill, Inc., is using the elevator and highway and rail facilities for corn purchased locally by the company. Rates to be charged at the elevator have been established by the city harbor commission as follows: Direct transfer (that is, unloading from truck, railroad car

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By WM KIX MILLER in Foundation Guide for Pay Roll Taxes

or barge, weighing and loading on another vehicle), one cent per bu.; elevation, 1¼ cents a bu., including 10 days' storage; storage beyond the 10 days, one-thirtieth of a cent per bu. per day, or one cent per bu. per month; turning (to cool grain and keep it from spoiling), one-fourth cent a bu.; mixing (one grain with another), one-fourth cent a bu.; blowing, that is air cleaning, one-half cent a bu.; clipping (removing the ends of light oats), one cent a bu.; sulphuring, to bleach stained oats, one cent a bu.; bagging, including loading of cars but with the owner furnishing sacks, one cent a bu. Rates on handling bagged grain and on "cleaning," that is, separating wheat from corn, and similar operations, will depend on exact nature of the service.

TEXAS

Wichita Falls, Tex.—The Southwest Feed Mills burned Dec. 11; loss, \$75,000. Cause of the fire was unknown.

Wichita Falls, Tex.—On the morning of Dec. 11 the plant of the Southwest Feed Mills was consumed by fire; loss, approximately \$75,000.

Houston, Tex.—The Port Commission is not contemplating any improvements or changes to the Public Elevator at this time. Our elevator equipment has been kept right up to the minute.—George B. Colby, Supt. of Elevator.

WISCONSIN

Galesville, Wis.—A 100-h.p. diesel engine is being installed in the 150-barrel rye flour mill of the Galesville Mill Co.

Alma Center, Wis.—Edwin O. Bakke, of DeSoto, has bought the Van Gorden elevator here and will operate under the name of Bakke's Feed Store.

Burlington, Wis.—Advance Feed Products Co., incorporated; incorporators: C. M. Hahn, A. Hahn and J. Moore; to manufacture poultry and stock feed.

Rice Lake, Wis.—It is reported that Archie A. Bergeron will rebuild his elevator that burned recently, as reported in the Nov. 25 Journals. Mr. Bergeron is quoted as saying that he is quite certain a piece of metal went thru the attrition mill late in the afternoon previous to the fire, and which lodged in the boot.

Beaver Dam, Wis.—Because Arnold Stancer, 17 years old, wanted his father, Fred Stancer, to give up his feed mill here and move to a farm, young Stancer set fire to the mill, the burning of which was reported in the Nov. 25 Journals. The boy was sentenced to one to two years at the Green Bay Reformatory and then paroled to the state board of control.

Yuba, Wis.—The old grist mill, still used for grinding purposes and in which was housed the generating equipment which supplied this village with electrical service, burned Dec. 6; loss, \$7,500. The fire was caused by gasoline with which the engineer was cleaning the gasoline engine. Robert Novy, pres. of the village, owned both the mill and electrical generating equipment.

WYOMING

Dixon, Wyo.—Idle for more than five years, the Dixon Flour Mill again started to grind grain into feed and flour during the last week of November.

A Corner in Corn?

To learn if there has been any attempt to corner corn J. W. T. Duvel, chief of the Commodity Exchange Administration, explained that more detailed reports are being required on trades in corn and wheat for the December delivery at Chicago.

Reports are now required on trades of 25,000 bus. in corn, where the former requirement was on daily trades of 200,000. On wheat trades of 100,000 are required to be reported, against 200,000 bus. formerly.

The tight situation in corn has been eased considerably since the open December interest of 28,000,000 bus., a month ago, has been reduced to less than 8,000,000 bus. at present.

Duvel's inquiry should disclose whether the holders of corn are demanding their pound of flesh.

Advising the taxpayer so that his tax may be reduced is frankly always a delicate procedure. However, it is our duty to point out how the taxpayer may legitimately reduce his future potential liabilities to the government (or to anybody else, for that matter). In this situation the duty, of course, is never that of suggesting evasion, but only that of following the law. In *Bullen v. Wisconsin*, Volume 24, United States Reports, Page 625, Federal Judge Holmes made a statement now classic in income tax cases. Judge Holmes said in that case, "We do not speak of evasion, because when the law draws a line, a case is on one side of it or the other, and if on the safe side, it is none the worse legally that a party has availed himself to the full of what the law points out. When an act is condemned as an evasion, what is meant is that it is on the wrong side of the line indicated by the policy if not by the letter of the law."

Many small business enterprises will be able to avoid payment of the whole of the federal unemployment compensation tax by making slight changes in their personnel. This will in most cases only be possible in those firms that have in their employ, say from eight to twelve individuals. A few illustrations may suggest some changes that can be made. It is emphasized that where the state law fixes a personnel minimum lower than eight employees a number of these suggestions have no point except as the minimum is considered:

Reducing Number of Employees. John Alden is the proprietor of a combination grocery store and meat market. In addition to his six regular clerks he employs two high school boys in their spare time to make deliveries and do other odd jobs in the store. If he continues to do this he is an employer of eight or more and must pay the federal tax on his total payroll. However, if he can employ another full-time man to do the work of the two boys he will not have to pay any federal tax at all. Many firms that hire several extra employees for the Saturday rush may find it very profitable to abandon this practice if they can.

Subletting Work. The A. C. Manufacturing Company has eight regular employees, one of whom handles their advertising. By letting this advertising out on contract to an advertising agency the federal tax is avoided. There are many instances where the force can profitably be reduced to less than eight through the means of an independent contractor, thus avoiding tax on the total payroll. Stabilization is also achieved in this manner, permitting the credits to be allowed under the merit-rating provisions.

Taking in Partners. The Acme Auto Parts Company, a partnership, needs ten men to properly carry on the business. The two partners are active in the business. There is a reliable young fellow who has worked for them a long time, and who is desirous of becoming a partner. The firm by taking him in as a partner can avoid liability for the federal tax.

Dissolving Corporation. The Eatmore Candy Co., a small corporation, has a total of seven employees, not including its officers, who also give their entire time to the business. All the stock is held by Smith, Jones, and Brown, who are also the officers of the corporation. Thus the corporation has ten employees in all. Smith, Jones, and Brown, by dissolving the corporation and operating as a partnership, would reduce the employees to less than eight.

Leasing Space to Mechanics. The Houston Garage employs nine men, two of whom are automobile mechanics. The mechanics are willing to lease space in the garage at a rental commensurate with the previous profits to the garage from the repair business. This is done and their former employers are relieved of all federal unemployment compensation tax liability.

The problem of minimizing the federal tax in firms that cannot entirely avoid liability is a

more difficult one. Wages must be reduced without decreasing the remuneration to employees, and this can be done by simply paying wages in some form other than cash. A hotel that has been requiring employees to furnish their own uniforms furnishes an example of the way this can be done. The hotel can minimize the amount of their tax by supplying uniforms themselves, retaining title to the uniforms, and lowering wages in an amount approximating the cost of uniforms to the employee. Any number of ideas along this line should suggest themselves to the employer, depending upon either the peculiar nature of the business or the circumstances of its organization. The state laws may offer some solutions for reducing the tax.

Shifting and Pyramiding of Tax. There are two ways of meeting the expense of this tax. The first is to increase the price of the commodities sold. The tax was originally intended to raise prices, and there is no doubt that those businesses which are able will shift it to the consumer. Of course, this is not possible in certain industries that work at a fixed selling price, such as the chewing gum concerns and the five and ten cent stores. In such institutions the tax will have to be absorbed as an expense of doing business. In any case since this is an excise tax the amount of unemployment tax paid can be deducted from the employers' income tax. It is generally expected that there will be a pyramiding and shifting of this tax through the various stages in the course of which a commodity travels before it is completed, and the consumer will bear the greatest part of the burden.

The federal government will not pay benefits to anyone for unemployment; benefits will be paid by the states. All money collected by the federal government by reason of the unemployment compensation tax will go into the federal treasury to be used for general governmental purposes except for the amount to be appropriated for administration of the Social Security Act. It is this feature of the Act which makes it imperative for the states to pass unemployment compensation laws. If they do not pass adequate unemployment insurance laws, the employers will be paying a federal tax, but their employees will not derive any benefits. It is contemplated, however, that Congress will appropriate from the funds accumulated by reason of the unemployment tax sufficient funds to assist the states in administering their unemployment compensation laws as well as the cost of the federal administration.

An unemployed person will be entitled to compensation for unemployment if his state has a law which has qualified under the federal Social Security Act, and if he is eligible for benefits under the state law. In general it may be said that all the state laws will provide benefits on a plan that will approximate actuarial principles of payment. That is, benefits will accrue only after taxes have been paid either by the employer, or by both employer and employee, sufficient to warrant such payments. In general there will be a waiting period of around three weeks, and payments will approximate one-half the wage for a period of ten weeks or more. The amount of benefits flowing from a uniform 3 per cent payroll tax will vary from state to state.

The federal Social Security Act provides that compensation must not be payable in any state for unemployment occurring before two years have elapsed after the first day for which contributions are required. The net result of this is that no benefits will be payable in any state, except Wisconsin, before January 1, 1938, and in most states on a later date.

All benefits must be paid through public employment offices in the state, or such other agencies as the Social Security Board may approve.

From Abroad

Italy is reported to need 40,000,000 bus. of wheat.

Argentina has voted 10,000,000 pesos for another campaign against the locusts.

Argentina's official report Dec. 18 placed the wheat crop at 249,854,000 bus., or 110,000,000 bus. more than last year. The estimate of 6,800,000 metric tons is 655,560 tons over the average for the last five years.

The Taiwan (Formosa) second rice crop for 1936 was officially estimated at 26,077,000 bus. of cleaned rice, according to information supplied by American Consul Maney of Formosa. This amount compares with 24,500,000 bus. for the second crop of 1935.

Italy's 1936 production is reported as follows, with 1935 comparisons in parentheses: Wheat 227,100,000 bus. (283,883,000), corn 119,034,000 (95,195,000), rice 940,424,000 pounds (862,774,000), potatoes 93,612,000 bus. (79,333,000).—International Institute of Agriculture, Rome.

The Czechoslovak Grain Monopoly issued an order on Nov. 3 prohibiting all exportation of barley and malt except that applying on sales contracts closed prior to that day, in an attempt to help domestic breweries and malt-working industries get adequate supplies for their own use. By the same order the premium on exports of malt were discontinued.

The soybean owes its rapid spread over more than a million acres in Illinois to its versatility for systems of farming and its ability to make a crop under extremely adverse conditions of soil and climate.

For maintenance 100 hens require approximately 19 pounds of feed daily, observes H. H. Alp, extension poultryman, University of Illinois; if they are laying 50% 100 hens will eat about 24 pounds of feed; if they are laying 70%, they will eat about 26 pounds.

Hearings at Chicago on the Robinson-Patman prosecution of the Kraft-Phenix Cheese Corporation began Dec. 16 before Examiner Chas. F. Diggs of the Federal Trade Commission. The alleged crime consists of allowing discounts on larger purchases and larger deliveries. The defense is that the sales promotion discounts are available to all retailers.

Food Shortage in Germany

B. W. Snow of Bartlett Frazier Co. commenting on press reports Dec. 14 that Germany would have to import some 35,000,000 bus. of wheat, said:

The definite admission of food shortage in Germany is the latest example of the tragic failure of political interference in the economics of production and distribution.

The theory of a governmental planned program of food production, undertaken under various guises in each case, has rested upon the theory that bureaucratic wisdom was to be trusted as capable of foreseeing natural factors of production and by a mental capacity, superior to that of the aggregate mass of land owners and operators, fix and carry out a production program regardless of natural conditions.

The failure has been universal and the result is a world shortage of food, points out the economist. Whether carried on upon the theory of national self-sufficiency in importing countries or upon the theory of proposed balance of production and requirement in exporting countries, the result has proven the same.

Italy, with a militaristic program of vastly enlarged home production of wheat, is now scouring the world for her daily bread. Russia, with a socialistic program of state farming and state control, has disappeared from the world's grain market. The United States by reliance upon superman ability to adjust production to an envisaged future requirement, without consideration of natural productive factors, has passed from the position of an exporting to the second largest wheat importing country. And now Germany, after years of bureaucratic control, threatens her peasants as "traitors" because nature has refused to obey orders of regimentation.

The world shortage of bread, now recognized as a tragic fact, once again demonstrates the limitation of political vision.

Omaha, Neb.—At a meeting of state and federal entomologists Dec. 5, reports indicated a substantial demand for poison bran as grasshopper bait next spring.

Lean hams, bacon and shoulders, from pigs about six months old, weighing not over 200 pounds, are preferred by the city consumers. Likewise this age and size of animal gives the highest recovery of edible protein from the feed it consumes. The trend of increasing and decreasing returns applies to live stock as well as to business.

Supply Trade

Chicago, Ill.—S. C. Klaus, vice-pres. Zeleny Thermometer Co. was married Dec. 19 to Miss Helen O. Brich. The couple is honeymooning in Florida and Cuba.

Washington, D. C.—A trade practice conference for the carbon dioxide industry will be held Jan. 7 by the Federal Trade Commission in its main hearing room.

Bolt, nut and rivet manufacturers are advancing prices immediately for the first quarter of 1937, according to Daily Metal Trade. Under the new schedule of discounts, bolt and nut prices are increased 10 per cent. Rivet prices are marked up \$4 per ton. The increases followed higher prices announced on finished steel products, and reflect wage advances granted in the industry recently.

Saginaw, Mich.—The Nickel Engineering Works has just placed on the market a new engineering achievement in mechanical bean sorting, the Nickel Bean Picker, Model No. 40. The machine is an inexpensive portable motor driven unit which is designed especially for sorting pea beans. Readers of the Journal can secure complete information on this machine by writing direct to the company.

Des Moines, Ia.—Reorganization of the Globe Machinery & Supply Co. into two new corporations became effective Dec. 1. One of the new companies is the Globe Hoist Co., the other will retain the original name. The hoist company will manufacture Globe auto hoists, with a factory here and in Philadelphia. The other company will continue the manufacture of its extensive line of equipment so well known to the trade.

Schenectady, N. Y.—The public utilities have followed in 1936, as in previous years, the policy of giving the consumer the benefit of lower rates. As a result the use of electricity has continued to increase so that in 1936 we had the largest consumption of electric energy ever reached in this country. The people of the United States now use over four times as much electric power per capita as the rest of the world. For 1937 we look forward to a continuance of improvement in business.—Gerard Swope, President, General Electric Co.

Beloit, Wis.—The Gaston Scale Co. has closed its doors, and has made an assignment for the benefit of its creditors. The assignee or trustee is E. A. Van Lone. The indebtedness of the company aggregates \$13,131.54, not including the account of the local bank or of the company's largest stockholder. The assets of the debtor, not including the buildings and real estate, which is covered by a mortgage held by the bank, comprised accounts receivable which have an estimated value of \$800, and tools and equipment which have an estimated value of about \$1,000.

Books Received

THE ECONOMIC FOCUS for January treats of wheat, its world production, imports and exports, futures, foreign markets, and what to study. Edited by Thomas Temple Hoyne, and sent free on request by Mitchell, Hutchins & Co., Chicago, Ill.

TRADING IN GRAIN, a 20-page booklet which dissipates common misconception of commodity markets and their functions, and which illustrates in detail transactions in the futures markets, has been issued by the public relations com'tee of the Chicago Board of Trade. The booklet is the work of Robert H. Moulton, an authority on grain marketing. It is being distributed by Howard, Bartels & Co., Chicago. Price, 10 cents.

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Field Seeds

Johnston, S. C.—P. D. Witt recently purchased a seed cleaner from the Sidney Grain Machinery Co.

Clarence, Ia.—Clover seed brought \$25 a bu. at the closing out sale held by Mrs. Ida Sonnenmaker Dec. 5.

Washington, D. C.—In its seed program the A.A.A. has expended \$19,179,358 from May 13, 1933, to Nov. 1, 1936.

Lynnville Ia.—A. R. Terpstra has bought the Lynnville Seed Co., formerly operated by him with C. O. Macy as a partner.

Madison, Wis.—A large Sidney seed cleaner has been purchased by the University of Wisconsin, College of Agriculture.

West Liberty, Ia.—Fred Hatch is manager of a new seed and feed store that has been opened in the Morris department store building.

Dayton, Ia.—J. I. Umsted has taken over the seed, feed and coal business of Elmer Shostrom. He assumed charge on Dec. 1.

Jacksonville, Fla.—Joseph Scharold has purchased the Walton Seed Store. Associated with him in the enterprise is W. H. Collins.

Leitchfield, Ky.—G. M. Haycraft & Son have moved into a new and larger store from which they now conduct their seed, grain and feed business.

New York N. Y.—During November New York shipped 2,600 bus. clover seed, against 19,746 bus. shipped in November, 1935, as reported by the Produce Exchange.

New York, N. Y.—With 200 shares of no par value stock, the Greenwich Nut & Seed Corp. has been incorporated by Arthur L. Kraut to handle seeds and nuts.

Story City, Ia.—Alvin J. Sowers has bought the former Highland Sales Pavilion and has remodeled the interior to accommodate a seed and feed business officially opened Dec. 5.

Rocky Ford Colo.—D. H. Garwood Seed Co. has incorporated, naming as its officers, Natalie Garwood Wilson, pres.; M. Lynn Wilson, vice-pres.; Florence M. Graham, sec'y-treas., and Ruth Keck, ass't sec'y-treas.

Chicago, Ill.—The American Field Seed Co., et al. were called before the Federal Trade Commission here on Dec. 14 to answer a complaint charging unfair methods of competition in selling field and garden seed.

Louisville Ky.—Election of officers by the Hall Seed Co. made Mrs. W. P. Hall, widow of the late pres., chairman of the Board, Ed Schaffner, pres.; Geo. W. McDaniel, vice-pres.; Harry Schaffner, sec'y, and Frank Dodge, treas.

Directory

Grass and Field Seed Dealers

CRAWFORDSVILLE, IND.
Crabbs, Reynolds, Taylor Co., clover, timothy.

GREEN SPRINGS, OHIO
The O & M Seed Co., seed merchants.

PAULDING, O.
Stoller's Seed House, wholesale field seeds.

ST. LOUIS, MO.
Mangelsdorf & Bro., Ed. F., wholesale field seeds.
Scott, T. Maurice, field seeds, carlot originator.

SAULT STE. MARIE, MICH.
Soo Terminal Co., grass, flax, peas.

SIoux CITY, IOWA
Sioux City Seed Co., seed merchants.

Lafayette, Ind.—Berry Seed Co., Clarinda, Ia., et al. were ordered to appear before Federal Trade Commission examiners here on Dec. 17, to explain use of alleged unfair methods of competition in the sale of field and garden seeds.

San Francisco, Cal.—Production of Cal-approved seed has reached the point where its distribution thru the regular seed trade channels may be recommended, reported the University of California at the quarterly meeting of the California Seed Council, Dec. 8.

Colorado Springs, Colo.—C. A. Fowler, Delta, took the sweepstakes in corn, W. F. Blaine, Delta, took the sweepstakes in wheat, Paul W. Swisher, Hotchkiss, took the sweepstakes in barley, at the 15th annual Colorado Pure Seed Show last month.

Minneapolis Minn.—An all day meeting of the executive com'te of the Northwest Regional Seed Conference on Dec. 15, appealed to the government for quick action in providing seed grain, or money with which to buy it, to needy farmers in the drouth stricken sections of the Northwest.

Spokane Wash.—C. C. Whealy manager of the Spokane Seed Co., announces the purchase of the one and two story brick building housing the company at N902 Washington St. This transaction affords the company permanent quarters. It has been operating here since 1908, business in each of the last six years showing an improvement.—F.K.H.

Colorado Springs, Colo.—John Sherman, Craig, was elected pres. of the Certified Seed Growers Ass'n of Colorado at the annual meeting Nov. 20, held in conjunction with the 15th annual Colorado Pure Seed Show. Geo. Hoffman, Iliff, was made vice-pres.; E. Bliss, Weld county, sec'y, and W. E. Doner, Colorado Springs, treas.

Lexington, Ky.—Charles S. Brent, head of the C. S. Brent Seed Co., died suddenly of a heart attack at his home the morning of Dec. 2. Mr. Brent, and his brother, A. C. Brent, had managed the seed company, established by their father in 1873, since 1905. The business will continue under the active management of A. C. Brent.

Jackson, Miss.—Dr. A. D. Suttle, agronomist at the Mississippi State College, has been named official state seed analyst. H. L. Weir has been appointed his assistant, and Major Allen McCluer has been made chief seed inspector, in accord with Mississippi's recently enacted state seed law. A small, but complete seed laboratory has been fitted up at the State College.

Lincoln, Neb.—Objections filed by the Nebraska Seed Co., Omaha, has caused the railway commission to rescind its approval of the request of railroads to permit two free stops of seeds, other than cane, sorghum and sudan grass, in transit, charging 2c per cwt. for each subsequent stop. Several other seed houses joined in the objection.

Hybrids are ahead of open-pollinated varieties of corn on all fields under test by the Illinois experiment station in both central and northern sections of the state. A check-up in 1935 found that the average yield of sound corn of the five best hybrids on 10 fields was 30.8% higher than that of the best individual open-pollinated variety. This was mainly because the hybrids were better able to withstand drouth and bugs.

The Flax Institute of the United States has formed a sub-com'te known as the Flax Development Com'te, which is to function along the lines of an earlier organization bearing a similar name. It is the hope of the members of the newly formed committee that the economic necessity for a domestic flax crop can be brought home to growers in the districts in the Northwest where flax can properly be grown.

Grants Pass Ore.—In spite of lower yield an acre and increased competition from California growers, Josephine county still maintains its position as the leading producer of Ladino clover seed in the United States. This county produced more than half the total Ladino seed of the nation during the 1936 season. Seed cleaning at the Josephine Growers Ass'n is virtually complete, and 15½ tons already have been shipped. Some five tons of seed remain in the warehouse awaiting grades. While tonnage is slightly less than last year and prices were set nearly 5c a pound lower, growers will receive a total revenue approximately equal to the 1935 figures, because of the greater proportion of this year's crop in the blue tag, or first grade classification.—F.K.H.

New Seed Trade Marks

J. C. Robinson Seed Co., Waterloo, Neb., has filed trade mark No. 382,604, "Rob-See-Co" arranged as an arch, for corn, sorghum, and vegetable seeds.

Ruhmann Grain & Seed Co., Waco, Tex., has filed trade mark No. 383,447 for field and garden seeds. A large "R-Co" constitutes the trade mark. Two other trade marks, Nos. 383,448, and 383,449, have been filed by the same company for the same products, being the words "Ruanco," and "Ruco," respectively.

Farm operators in the United States received a return of 7.6% on their net capital investment used for agricultural production in 1935 as compared with a return of 4.4% in 1934. If the approximate value of farm dwellings in later years is deducted from the total of invested capital, the return on capital used in production in 1934 would have been about 5% and in 1935 it would have amounted to over 9%, according to statistics of the Dept. of Agriculture as analyzed by the National Industrial Conference Board.

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Short Clover Seed Supplies Reviewed by Seedsmen

Dr. E. A. Hollowell, Senior Agronomist, Washington, D. C., reviewed the serious existing shortage of desirable red clover seed, in the principal address before the 37th semi-annual meeting of the Western Seedsmen's Ass'n, Kansas City, Mo., Dec. 5. Some seedsmen, he said, declare the shortage to be the most acute in 34 years. The 1936 crop was the shortest on record, only three-quarters the size of the short crops of 1934 and 1935. Reduced stocks have left the trade in a position where supplies are insufficient to fill the demand.

Dr. Hollowell explained a number of charts comparing the crops from imported red clover seed with the crops from adapted domestic seed. In each case the resulting hay crops favored the domestic seed. Fear was expressed that farmers would mix imported and domestic seed for planting, a practice on which Dr. Hollowell frowned.

HARRY H. HOBBS, Detroit, Mich., first vice-pres. of the American Seed Trade Ass'n, and chairman of its legislative com'tee, pleaded for greater interest in national legislative questions from seedsmen. Seedsmen doing a relatively local business, too frequently leave national legislative questions to those who will work on these problems. But regulation is in the air, and demands the earnest thought, and the greatest unity of action that the trade has even known. More state seedsmen's ass'ns, more state councils, and close cooperation with the national body is necessary to protect the interests of the seedsmen.

PRES. JOHN W. MATHYS, Minneapolis, presided. In his annual address Pres. Mathys said:

At no time in the past 37 years has the need for co-operation and mutual understanding been greater. Also, there may have been no time when it was more necessary for each of us to take stock of ourselves, our business, and the American seed trade as a whole. Fundamental changes, economically and socially, have been under way for 20 years, and have been intensified during the past seven. Where these are taking us, only the future historian will record, but it is necessary for each and all to keep abreast of conditions.

An industry should cooperate to prevent price cutting and price demoralization. If each of us thoroughly understands his own business, desires to make the most of it and to think of it as a monument to himself, there will be no

price cutting. It is not possible to conduct a business without a fair profit if it is recognized that profits are needed to enlarge its scope and give the planter better grown, better quality seeds.

State and Federal Seed Legislation is becoming an increasingly important factor in our business. Many laws and regulations are now in force and more will follow. They include requirements for labeling, purity and germination tests, where and when grown, when tested, when packed, as well as licensing provisions. Concerted cooperative effort is imperative in each state to prevent a flood of new laws, many of which would be unnecessary and certainly impractical.

Other industries are competing for the consumers' dollars as never before, by the most effective advertising known to date. In addition to magazine, newspaper, radio, billboard, and direct orthodox methods, it includes news interest stories in the press and periodicals. Is it too much to hope that the general subject of agriculture might some day have sufficient news appeal so that our magazines and newspapers might give it a rating somewhat comparable with other subjects, such as industry, sports, science, music, medicine, movies, etc.? Perhaps it is our fault in not providing both the agency and the news.

Experiment stations have become more important in our agricultural set-up. New varieties in farm crops, nowers, and vegetables are being introduced from these stations and thru field workers. We should know what is going on and perhaps they could well use some information which seedsmen possess.

Shortages have developed in most farm seed items, causing sharp price advances. Most informed seedsmen believe the demand, before the 1937 crop becomes available, will more than equal the supply on several important farm crop seeds. Prices appear firm, certainly there appears no occasion for uneasiness. For the present, dry weather conditions, generally, do not as yet point toward even normal crops in 1937.

Increased purchasing power now in sight should mean a greater demand for good seed. It seems to me that we have every reason to look forward hopefully to a satisfactory prospect for 1936-1937 in the seed business.

In his reading of the minutes of the April meeting Sec'y Elmer H. Sexauer, Brookings, S. D., showed the finances and affairs of the ass'n to be in good order.

In the evening the 150 delegates were entertained royally by Rudy-Patrick Seed Co., and Peppard Seed Co. with a banquet and entertainment in the roof garden of the Hotel Kansas Citian. Several "Seedsmen Song Clubs" were formed, and all enjoyed a fistic exhibition of three-round amateur bouts, climaxed by a battle royal between five colored maulers, named for prominent seedsmen.

Winter Seed Meeting at Nashville

Southern seedsmen gathered for the midwinter meeting of the Southern Seedsmen's Ass'n, Nashville, Tenn., Dec. 13-14, in greater numbers than ever before. No regular sessions were held on the first day, which was reserved for the informal discussions that follow the gathering of groups.

Pres. A. J. Biggio presided at the Monday business meetings, which closely followed the program.

Action taken set the midwinter meeting as a regular activity of the ass'n. Heretofore it has always been held on call from the pres. A proposed change in the time of the annual convention received little support, ending with a decision to continue these meetings in June of each year.

Subjects discussed before the convention included a review of the Bell Case, soybeans, seed supplies, and the Robinson-Patman Act influence on price differentials.

Canada Develops Drouth Resisting Wheat

A drouth resisting wheat, hardy enough to withstand long and severe heat waves, yet of good milling and cereal quality has been developed by the University of Alberta's Dr. O. S. Aamodt, according to announcement of Dr. K. N. Neatby of the field crops department of the University. Dr. Aamodt developed the new strain in six years of experimental work. The new strain is named "Canus."

In developing Canus wheat Dr. Aamodt crossed a Russian and Siberian wheat, resistant to drouth, with strains of high quality Canadian milling wheat.

Early Varieties of Milo

Sec'y of Agriculture Wallace reports that experiments with newly developed early maturing varieties, such as Sooner milo, indicate that they may be planted as late as July 1 or 15 in most of the commercial grain sorghum producing areas and still mature a crop of grain. For late planting, certain of these newly developed varieties are far superior to the ordinary varieties that are more productive when planted early. Sooner milo has matured and yielded satisfactorily as far north as South Dakota, and also under irrigation at Logan, Utah, in the intermountain region.

The root-rot disease attacking milo and darso has been found to be caused by the organism known as *Pythium arrhenomanes* Drechs. This organism occurs in the soil of many localities and attacks corn and sugarcane and certain varieties of sorghum. This disease can be controlled by the use of resistant varieties. Resistant strains of milo have been selected by the Kansas Agricultural Experiment Station in connection with cooperative studies of the disease. Susceptibility to the disease is inherited in a simple genetic manner.

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Smut Resistant Wheats

Experiment stations in wheat growing areas have sought to produce new varieties of wheats which are resistant to bunt, or stinking smut.

At the Utah station this breeding work has created a new variety, Relief, more resistant to smut than any other commercial variety which can be grown successfully in Utah and Idaho.

Work in Oregon introduced Rex in 1934, and at Washington stations Hymar has been developed. Both of these new Pacific coast varieties have proved highly resistant to smut, and have given high test weight and good yields under favorable moisture conditions. The acreage devoted to them is being rapidly increased.

Soybean Production Averages

The average yield at Urbana in 1934 of the sixteen soybean varieties compared on the South-Central rotation of corn, corn, corn, and soybeans was 31.9 bus. an acre. The ten highest yields were: Type 117, 31.8; Manchuria 13-177, 36.4; Mansoy, 36.3; Scioto, 34.9; A. K. 125, 33.9; 04002-B, 33.4; Illini, 33.2; Macoupin, 32.7; A. K. 146, 32.0; Manchu, 31.5.

At Alhambra in Madison county the comparable average yields of the five highest yielding varieties which have been grown for at least three years during the nine years 1926-1934 were: Mansoy, 26.2; Macoupin, 26.0; Morse, 25.6; Illini, 24.9; Manchuria 13-177, 23.8.

At DeKalb in northern Illinois the comparable average yields of the five highest yielding varieties grown for at least three years during the period 1923-1934 were: Manchu (Thomas strain), 27.2; Manchu (Wisconsin strain), 25.9; Hybrid Population, 25.4; Illini, 24.8; Manchu (Illinois strain), 24.0.

New strains or varieties also grown at DeKalb but only for one or two seasons and which have a high comparable yield were Selection (M.T.), a brown-hilum soybean selected from Manchu; Mukden, a new variety imported from the orient by the U. S. Department of Agriculture and named by the Iowa Agricultural Experiment Station; and Funman, a new selection from Manchu.

Imports of Forage Plant Seeds

Imports of forage plant seeds during November, and during the five months prior to Dec. 1, 1936, as reported by the Bureau of Plant Industry, have been as follows, in pounds:

	November 1936	1935	July 1 to Nov. 30 1936	1935
Alfalfa	773,300		1,078,600	
Bluegrass, Canada	11,100	14,500	35,100	52,900
Brome, smooth	39,500	100,000	308,700	120,900
Clover, alsike	739,200		1,504,700	
Clover, crimson		103,300	5,116,900	2,017,100
Clover, red	707,600		1,187,100	
Clover, white	212,600	196,500	576,600	569,000
Grass, orchard	124,100	34,200	1,235,900	34,700
Fescue, meadow	1,700		1,700	
Millet, foxtail	24,700		5,200	250,500
Mixtures, clover	9,600		9,600	
Mixtures, grass	2,000		35,000	500
Rape, winter	1,300	1,092,600	6,389,900	1,306,300
Ryegrass, Italian		1,300	13,300	26,900
Ryegrass, perennial	89,600	16,900	418,600	163,500
Timothy			28,300	600
Vetch, common	54,700		54,700	
Vetch, hairy	16,300	133,700	1,821,500	1,486,100
Vetch, Hung.				300
Bentgrass	2,500	4,300	3,700	19,800
Bluegrass, rough	41,800	51,500	126,100	130,800
Bluegrass, wood		1,100	500	1,100
Clover, suckling	13,800	4,000	41,900	45,200
Dogtail, crested	300		6,900	10,000
Fescue, chewings	2,800	58,400	701,100	177,500
Fescue, other		15,400	47,500	39,200
Grass, Dallis	11,200	2,300	33,300	18,600
Grass, molasses	2,200		2,200	
Grass, rescue	200	600	900	10,600
Grass, Rhodes	1,000	100	4,100	1,200
Grass, Sudan				206,100
Grass, velvet		100	600	2,500
Medick, black	8,400		14,800	29,100
Sweetclover, white	690,700		1,521,800	
Sweetclover, yellow	100,400		165,600	
Wheatgrass, crested	30,000	44,900	59,200	70,000
Wheatgrass, slender	62,000		87,500	

A New Pop Corn Hybrid

A new hybrid pop corn has been developed by the Minnesota experiment station and named Minhybrid No. 250. It is a Jap hybrid hullless variety, differing from standard Japanese hullless in several details.

The new hybrid, developed under the direction of H. K. Hayes, was produced by crossing the inbred lines of Japanese hullless one and six and using the first cross for the commercial crop. Records kept at the experiment station show it produces 16% greater average yield, and shows an average popping expansion 29% greater than standard hullless varieties. At the same time the crop has shown unusual ability to withstand drouth conditions.

A New Oat

In variety trials conducted by George H. Dungan, W. L. Burlison, and C. A. Van Doren, Illinois Experiment Station, a new oat, Illinois 140, has given unusually good results.

This oat is a selection from Sixty-Day (Kherson). It is an early maturing white oat, earlier than Gopher, and has a medium-stiff straw. Altho the yield of Illinois 140 is somewhat less than that of the red oat Columbia, it is superior as a market oat, especially when used for processing purposes. A limited amount of seed of this new oat was distributed to a few growers for seeding in 1936.

Illinois 140 has been under test in variety trials at Alhambra, Ill., for three years and at Urbana for four years. Average yields at Urbana have been 62.5 bus. per acre.

Early Seed Corn Loans

Mid-western drouth affected states applied for loans on 19,000 bus. of seed corn, in the first two weeks that the emergency federal seed corn loans were made available, announces Cecil A. Johnson in charge of the program. Farmers in Iowa, Nebraska, South Dakota, Minnesota, and Colorado made the applications.

Two types of loans are available on farm-stored corn. The first is at the rate of \$1.75 per bu., and applies only to selected seed corn with 90% germination or better, and not more than 14% moisture. It is offered only in sections recognized as seed-deficient, and in a few adjacent areas where acclimated seed corn is available.

The regular loans of 55c a bu. on farm-stored cribbed corn is expected to make a secondary supply of seed available for spring planting.

Suits Expected on Strike-Bound Corn

Suits involving close to \$2,000,000 are expected to grow out of the 100,000 tons of Argentine corn in strike-bound ship holds on the Pacific Coast.

Most of the corn was sold on a basis of fair average quality of the shipments for the month, under London Rye Terms providing "condition guaranteed upon arrival," slightly dry warmth not to be considered.

Differences exist in opinions as to when a ship "arrives," whether this is at the time the boat enters the harbor, at the time the boat places its cargo within reach of the tackles, or at the time the corn is discharged into hoppers on the buyer's dock. Some contracts specifically provide for definite delivery. London Rye Terms provide that no sample except those taken "at the time of discharge," shall be recognized, then the loss is to be determined by a London Arbitration Com'ite on sealed samples sent to London. The loss is based on the percentage of difference in value between the grain as represented by the sealed samples and f.a.q. samples on the London market.

Soybean pancake flour, "Kreemex," is a new product of Allied Mills, Inc.

Grain Carriers

The Midwest Shippers Advisory Board will meet at Chicago, Jan. 7.

Navigation closed Dec. 12 for vessels leaving the Canadian Head of the Lakes.

Montreal, Que.—Shippers in North America have chartered 150 loads of space here for next May and June shipment of wheat.

Chicago, Ill.—A group of middle western contract motor carriers met here Dec. 15 to organize the Interstate Contract Carriers Ass'n.

Omaha, Neb.—Grain shippers are seeking a downward revision of grain rates to the Pacific coast, and the I.C.C. conducted a hearing on the subject Dec. 9.

Washington, D. C.—Grain and grain products were loaded into 30,975 cars during the week ended Nov. 28, compared with 30,154 during the corresponding week a year ago.

Chicago, Ill.—The western trunk line rate com'ite has recommended denial of the application for a 25½c proportional rate on wheat from lower Missouri River crossings to eastern gateways, via Minneapolis.

Washington, D. C.—Of the \$700,000,000 loaned to railroads by the Reconstruction Finance Corp., and the Federal Emergency Administration of Public Works, \$310,176,399 have been repaid by the railroads.

Buffalo, N. Y.—A collision near Point Byron on the canal sank the wheat laden barge Raymond Jordan early this month. The barge was raised by a state derrick boat, and the wheat was returned to Buffalo for drying.

The National Highway Users Conference criticizes the "ton mile tax," as employed in some states, as a self assessment form of taxation, unequal in application, impossible to administer impartially, and prohibitive in its costs of tax collection.

The plan for unification of truck rates in C.F.A. territory, on which the Central States Motor Freight Bureau has been working for several months, is reported as abandoned, due to failure of some of the trucking companies to cooperate in the plan.

Chicago, Ill.—Efforts are being made by railroads of the Central Freight Ass'n territory, the Trunk Line territory and the New England territory, to unify transit rules and privileges. Territory involved is from eastern Illinois to the Atlantic Coast.

Chicago, Ill.—The minimum rate of 45c per cwt. on lcl shipments allowed free pick-up and delivery service, as applied by eastern railroads, is under fire from the Chicago Ass'n of Commerce, which asks postponement of the already active service, and a broadened rehearing.

New York N. Y.—Denied a special statutory court order to halt free pick-up and delivery service instituted by eastern railroads, organized truckmen propose to carry their plea to the Supreme Court. The truckmen contend the free service will ruin or seriously cripple the trucking business.

The I.C.C. has modified its amended orders of July 13 and August 13 to permit the C. B. & Q., Colorado & Southern, Great Western, and Union Pacific railroads to continue reduced rates on grain and grain products in western territory and for export, until June 30.

Washington, D. C.—Grain and grain products were loaded into 1,709,449 cars during the 49 weeks ending Dec. 5, compared with 1,499,049 during the like period last year, an increase of 210,400 cars. During the week ending Dec.

5 loadings of grain and grain products totaled 36,267 cars, compared with 30,996 cars during the same week last year.—Ass'n of American Railroads.

The Interstate Commerce Commission has requested a transcript of the Congressional investigation of the Van Sweringen railroad empire, acquired by Geo. A. Ball, Muncie, Ind., glass manufacturer, and held thru control of the Midamerica Corp. The request is to be granted, and proceedings are expected to be directed by the I.C.C. against the holding company.

Kansas City, Mo.—The transportation committee of the Kansas City Board of Trade has decided to enter a separate complaint with the Interstate Commerce Commission, to deal with inter-market proportionals on grain, rather than join in the complaint of Minneapolis milling interests on irregularities in the granting of transit privileges by railroads. A broad complaint covering grain is involved.

Kansas City, Mo.—Reduced proportional all-water rates on barge lots of grain from Kansas City to various river points, when destined to southern and southeastern territory, have been made effective by the Federal Barge Lines. On a minimum shipment of 140 tons the all-water rate from Kansas City to St. Louis has been reduced to 4c, to Cairo 5.8c, to Memphis 8c, to Vicksburg 11.8c, to New Orleans, 15.5c.

Chicago, Ill.—The Western Trunk Line Com'te has under consideration a proposal to authorize stopping in transit privileges for partial unloading of grain, grain products and related products in the Western Trunk Line and Southwestern Freight Buro territories. The proposal would allow two stops in transit at \$6.30 for each stop, intermediate between origin and destination on direct shipments, between transit point and final destination on transited cars.

Washington, D. C.—The National Industrial Traffic League has filed two petitions with the Interstate Commerce Commission, seeking suspension of the Consolidated Freight Classification No. 11, containing increases in carload ratings as part of the carriers' general program for nation-wide increases in rates; and suspension of numerous east and west bound transcontinental tariffs covering rate advances on carload and lcl shipments equal to the so-called "emergency charges," which expire on Dec. 31.

Louisville, Ky.—A committee composed of C. D. Jones, Nashville, H. A. Volz, Louis-

ville, and Ed Terrill, Cincinnati, for the grain trade; A. F. Seay, St. Louis, Ed Wilkinson, Birmingham, and Carl Sherrill, Statesville, for the feed manufacturers, and four others representing milling interests, was appointed to formulate plans for maintaining present car load and less than car load rates and privileges, at a conference on traffic matters held here Dec. 3. Formation of a "Southern Grain & Grain Products Traffic Council," was suggested. C. D. Jones is temporary chairman.

Railroads Refused Continued High Rates

The request of Class I railroads for a continuance of the emergency charges, due to expire Dec. 31, was refused in a nine to two vote of the Interstate Commerce Commission Dec. 19.

Postponement of the expiration date, pending consideration of proposed changes in the basic rate structure, had been sought by the carriers. The commission took the stand that the emergency under which the carriers had been given authority to make the surcharges involved no longer exists.

"Shippers and receivers of freight," said the commission, "have every reason to expect the elimination of the emergency charges at the end of this year and an extension, in the light of our previous expression, under existing conditions would amount almost to a breach of faith."

Cheaper Transportation Via Rails

Railway transportation is actually cheaper than transportation over the inland waterways, declared William B. McKinstry, comptroller for the Illinois Central railroad at a recent hearing before the Interstate Commerce Commission in Cincinnati. His analysis of expenses involved in shipping 1,627 carloads of freight, interchanged by his railroad with the Mississippi Valley Barge Line in 1933 and 1934, showed that the cost of handling freight shipments by joint rail and water routes exceeded the cost of corresponding all-rail movement by 80% to 102%.

During the two years covered in the testimony a total of 49,754 tons of freight originating or terminating on the Illinois Central railroad was interchanged with the Mississippi Valley Barge Line, and the shipments moved an average distance of 1,204 miles, compared with an average all-rail distance of 745 miles.

To produce maximum returns from the land used in raising hogs, the hogs should be raised for protein instead of fat.

Private Carrier Jurisdiction

Sec'y McGinty of the Interstate Commerce Commission has issued a statement in regard to private motor trucks as follows:

Numerous inquiries have been received regarding the status under the motor carrier act, 1935, of a mercantile or manufacturing establishment which engages in no transportation of property excepting property which is sold or purchased by such...establishment and which is transported from or to its established place of business as an incident to the conduct of such business, but for compensation received either directly or indirectly as an allowance in connection with the purchase price or otherwise.

There has been no formal decision of the commission relative to its jurisdiction over such transportation. Until such a formal decision has been made...the commission will not require compliance with the general provisions of the motor carrier act...however, they (mercantile establishments owning and operating trucks) will...be subject to any regulations for private carriers...which the commission may hereafter prescribe under the authority of Section 204 of the motor carrier act and which relate to qualifications and maximum hours of service of employees and safety of operations or standards of equipment.

Is there any hope in this notice for the shippers who have experienced loss of business to itinerant merchant truckers?

Maritime Strike Recess

Both state and city officials at Portland, Ore., were in argument with strikers on Dec. 12, demanding release of a strike-bound shipload of Argentine corn to Oregon poultry raisers. Portland strikers refused to recognize a corn shortage, and Oregon poultry raisers, facing a feed shortage, threatened to "march to Portland to unload the ship." Should the farmers actually start their march they were offered police protection.

Floyd Oles, manager of the Pacific Northwest Feed Ass'n, with committee members, grew disgusted in countless attempts to deal with the strikers because "there is no central head to deal with." The various unions pass the buck from one individual and one union to another. The Ass'n recommended that its members dole out supplies of corn on hand as sparingly as possible, in expectation that when a sufficient number of farmers are out of corn some settlement may be forced.

At San Francisco on Dec. 15, a "gentlemen's agreement" between the strikers and the steamship companies was reached at the end of 20 hours of continuous conferences, and the deadlock which had gripped the west coast for 46 days appeared broken. The agreement involved union hiring halls, a wage increase, and preferential hiring.

Vitamin D secreted in the egg has been found to be in the same biological form as the vitamin D fed to the bird laying the egg.

Decisions and New Complaints

Before the Interstate Commerce Commission:

In Simonds-Shields-Lonsdale Grain Co. v. A. T. & S. F. et al., No. 27340, the complaint was dismissed. Charges, wheat, points in Kansas to West Plains, Mo., were not found unreasonable.

I. & S. No. 4261, the petition of the Gold Medal Flour Co. of Texas et al. for vacation of the suspension order on transit of animal and poultry feed in Texas, has been denied by the Interstate Commerce Commission.

In Vandeslice-Lynds Co. v. Missouri Pacific, No. 27087, switching charges collected at Kansas City on carloads of wheat, from Peterson, Pretty Prairie, and Sawyer, Kans., transited at Kansas City, and the products reshipped to Conway, Ark., were found applicable, and the complaint dismissed.

Alfalfa, red and alsike clover seed are permitted to use Salt Lake City, Utah, as the key point for Utah common points as a result of the decision in I. C. C. No. 25980, Idaho Grimm Alfalfa Seed Growers Ass'n v. A. & R., and H. L. Hammond v. Same. The case involved shipments from points in Utah and Idaho to destinations in western trunk line and official territories, and was brought by the railroads. The decision permits groupings of origin and destination points, effective Jan. 16.

RANDOLPH GRAIN DRIERS

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Feedstuffs

Seattle, Wash.—The 1937 annual convention of the Pacific Northwest Feed Ass'n will be held here on Feb. 22.—Floyd Oles, manager.

Cincinnati, O.—November receipts of grain sorghums were 2,800 bus., of feed 870 tons and of hay 1,100 tons compared with grain sorghums 2,800 bus., feed 1,050 tons and of hay 869 tons in November, 1935.

Hot Springs, Va.—The Homestead hotel here has been selected for the 1937 convention of the American Feed Manufacturers Ass'n, June 10-11. Hot Springs is on the C. & O. railroad, easily accessible from both the east and west, and convenient by motor.

Wausau, Wis.—Nearly 60 feed dealers of this territory attended a district meeting of the Central Retail Feed Dealers Ass'n here on Dec. 11. Present to discuss ass'n affairs was Sec'y David K. Steenbergh; to talk on feed loans and drouth relief, W. J. Rogan. The Social Security Act was discussed.

Adding hulled oats to a corn and tankage ration for sows and suckling pigs at the Illinois experiment station met with the complete approval of both sows and pigs. The pigs ate more of the hulled oats ration than did those receiving only corn and tankage, and gained almost one-third faster.

Peoria, Ill.—November receipts of millfeed were 9,940 tons and of hay 660 tons, compared with millfeed 11,320 tons and hay 20 tons in November, 1935. November shipments of millfeed were 12,405 tons and of hay 30 tons, compared with millfeed 10,775 tons and hay 20 tons in November, 1935.

Washington, D. C.—Distillers Dried Grains output during November of 21,520 tons was the largest of the season. Production totaled 20,620 tons during October and 18,120 tons during September. Shipments during the month aggregated 21,620 tons leaving stocks of 1,150 tons at plants at the end of the month.—Buro of Agricultural Economics.

Washington, D. C.—The Resettlement Administration has revised its basis for emergency feed loans to drouth stricken farmers, requiring that the number of animals be reduced to subsistence needs, or to foundation stock. Local Rural Rehabilitation advisory com'tes, or county supervisors must recommend the loans.

In Illinois tests twenty 102 pound pigs, self fed a mixture of 88 parts of corn, 9 of tankage, and 3 of alfalfa meal, gained nearly twice as fast as a similar group receiving only corn, with minerals, free choice. Pigs receiving the supplement ate only 72% as much total feed to reach market weight as the check lot. Each 100 pounds of supplement eaten saved 406 pounds of corn and 17 pounds of minerals, and produced uniform gains in the animals receiving it.

In a test comparing steam-rendered tankage, cottonseed meal, and dry-rendered tankage as protein supplements for 2-year-old steers the Illinois experiment station found the steam-rendered tankage made the best gains, the cottonseed meal made the second best, and dry-rendered tankage rated third. The conclusion was that while neither ordinary tankage nor meat scrap were as well liked by cattle as cottonseed meal, these animal protein supplements may be profitably used when their prices permit purchase of a unit of protein more cheaply than in the standard protein supplements ordinarily used for cattle.

St. Louis, Mo.—November receipts of kafir were 14,000 bus., compared with 15,400 in November, 1935, and shipments were 5,700 bus., compared with 9,800 bus. in November, 1935. November receipts of hay were 720 tons, compared with 540 tons in November, 1935, and shipments were 188 tons, compared with 252 tons in November, 1935.

Portland, Ore.—Ambrose Brownell, Milwaukie, was elected pres., and Howard Hadley of the Oregon Feed Dealers Ass'n, was named vice-pres., at the organization meeting of the combination grower-dealer-ass'n body, the Oregon Poultry Council. This Council will foster legislation and research work in the interests of the poultry industry and allied trades.

Washington, D. C.—Developments during November gave further indications pointing to a sharp reduction in cattle feeding during the coming winter and spring compared with a year earlier. Prices of corn and other feeds advanced rather sharply during the month, which tended to increase the cost of feeding. Prices of feeder cattle remained high in relation to fat cattle prices in view of the high feed costs. While feeding in the Corn Belt States will be less than a year ago it is probable that more cattle will be fed in the Western States, where grain and hay prices are relatively cheap compared with those in the Corn Belt—U. S. Dept. of Agriculture.

Feeding Oats to Pigs

Finding means of utilizing more oats in rationing Illinois swine, which at the beginning of 1935 numbered more than 3 million, has been the object of work conducted at the Experiment Station for several years. In two tests in which hulled oats were fed as a major part of the ration, pigs in drylot developed symptoms of stiffness. These symptoms appeared after the pigs had been on feed eight to ten weeks and even when the ration contained a liberal amount of alfalfa meal. W. E. Carroll and W. P. Garrigus set out to determine the cause of this trouble and to find practical means for its prevention. As a result it has been found that the addition of a small amount of bone meal to a hulled-oats ration greatly increased its effectiveness.

Five groups of ten fall pigs were self-fed oats rations mixed in different proportions, each ration containing approximately 15% protein during the first part of the test, 14% thereafter.

Cod-liver oil proved to be a less valuable supplement to the basal ration than bone meal. One pig in the cod-liver-oil group had developed typical severe symptoms of stiffness by the end of the tenth week. The blood calcium (only one pig tested) had not declined materially but the phosphorus content was high.

Addition of both bone meal (1.5%) and cod-liver oil (1%) apparently corrected the mineral deficiencies of the oats ration, since the pigs receiving this supplement reached an average weight of 200 pounds in 98 days without loss. One pig showed a slight stiffness after ten weeks and remained somewhat lame to the end of the test. The calcium and phosphorus of the blood serum remained at normal levels thruout the period of observation.

When both bone meal and cod-liver oil were included in the hulled-oats ration the gain was slightly, tho not significantly, increased; and each 100 pounds of the hulled-oats ration thus

supplemented was as effective in producing gain as 125 pounds of the corn-and-supplement ration.

Force Feed Young Pigs

Forced feeding of young pigs with a balanced ration co-ordinates the growth of the skeleton and muscular system. Finishing the pig as he grows, rather than fattening him after he has attained maturity, gives a better grade of pork, more fully meeting the demands of a fastidious buying public. The public prefers the lean meat of the healthy young animal to the coarser, heavier meat of the hog that has passed maturity.

If the animal is properly fed market maturity need not be over 180 days from birth, or from 100 to 120 days from weaning. This period of feeding a balanced ration, complete in its mineral elements, vitamins, and supplementary proteins, should produce a prime animal, weighing between 200 and 220 pounds.

When growing pigs are finished by hogging down a corn field 100 pounds of live pork may represent 18 bus. of corn; but under the best conditions adapted to routine feeding practices a hundredweight of hogs should be produced from 6 bus. of corn.

Illinois Feeders Change Protein Buying Habits

Discovery that soybean oil meal and animal tankage can be used successfully in fattening cattle has made considerable difference in the protein-buying habits of Illinois farmers. Formerly all the standard protein concentrates used for balancing beef-cattle rations were produced mainly outside the corn belt. Now, stockmen spent many thousands of dollars for feeds they themselves help to produce.

Tests with fattening steers in drylot by H. P. Rusk and R. R. Snapp have been conducted at the Illinois Experiment Station.

In the first of these experiments, finely ground hydraulic, or "old process," soybean oil meal processed at the regular temperature (220° F.) was compared with pea-size cottonseed meal (43 per cent protein) for steer calves fed for 220 days. As in previous comparisons made at the Experiment Station, no differences of any importance were observed.

Inasmuch as previous tests have indicated that soybean oil meal processed at low temperatures was more palatable and had a somewhat higher feeding value than that subjected to the usual amount of heat (220° F.), one lot of calves was fed this latter meal in comparison with a second lot fed soybean oil meal processed at 185° F. Contrary to previous results no significant differences were observed between the two lots. If anything, the calves fed the regular meal had more finish at the end of the test, as they were valued 15 cents a hundredweight higher than the lot fed the low-temperature meal.

One of the criticisms frequently made of soybean oil meal is that it does not supply enough calcium for young growing cattle fed only a limited amount of legume hay. That there is basis for this contention was indicated by the fact that thru the feeding of finely ground limestone, at the rate of .1 pound a head daily, significantly larger gains and a better selling price were obtained.

Detailed results of the tests referred to in the foregoing appear in the following table:

Beef Calves; December 22, 1933, to July 30, 1934
(Average initial weight, 435 pounds)

	Cottonseed meal (lbs.)	Soybean oil meal, low temp. (lbs.)	Soybean oil meal, regular temp. (lbs.)	Soybean oil meal and limestone (lbs.)
Average daily gain	2.14	2.11	2.13	2.21
Feed for 100 lbs. gain:				
Shelled corn	490	491	487	483
Protein concentrate	71	71	70	70
Corn silage	327	331	328	316
Alfalfa hay	93	94	94	90
Hog gains to each steer	43	39	37	43

Model Feed Bill Approved by Feed Officials

With their approval of a model feed bill the largest number of delegates ever to attend the annual meeting of the Ass'n of American Feed Control Officials, Inc., have come closer to accomplishing uniform feed laws than at any time in the ass'n's history. The 28th convention was held in the Raleigh Hotel, Washington, D. C., Dec. 3-4. Proceedings of the first day were briefly reported in the Dec. 9 issue of the Journals.

Election of officers placed: L. F. Walker, Burlington, Vt., pres.; G. H. Marsh, of Alabama, vice-pres.; L. E. Bopst, College Park, Md., sec'y-treas. (re-elected).

Whether or not the information printed on tags attached to containers for feeds, supersedes the information printed on the sacks depends upon the feed laws of the state where the feed is found, explained G. H. Marsh, in a paper on this subject. Some states require all information to be printed on the tag, regardless of the printing on the sack. The information printed should coincide with the registration.

Bacterial examination is important when dealing with fish meal, said J. R. Manning, who also declared that serious attention is being given to creation of an index of decomposition in fish meal and meat scrap.

Following the report of the executive com'tee a tentative definition for lespedeza stem meal or lespedeza straw meal was adopted as follows: "Lespedeza stem meal or lespedeza straw meal is the ground product remaining after the separation of the leafy material or the separation of the seed from lespedeza hay or meal. It must be reasonably free from other crop plants and weeds."

A resolution was adopted requesting the Bureau of Animal Industry and the Bureau of Fisheries to develop indexes of decomposition of animal protein concentrates prepared from land and aquatic animals respectively.

Among the definitions adopted for future discussion were:

"Malt sprouts is a product of the manufacture of barley malt, composed principally of sprouts with such portion of hulls as is necessary in the cleaning of the barley kernel after malting; providing that nothing shall be recognized as malt sprouts that does not contain at least 15% protein."

Definitions for corn distillers' dried grain-F-2 and rye distillers' dried grains F-3 were

made tentative. Definitions of brewers' dried grains T-4, corn gluten T-8 and corn gluten meal T-9 were made official. Definition 84 on milk sugar feed, or dried whey, was eliminated from the book of methods.

Included in the definitions made tentative were:

"F-8. — Cottonseed cake is a product of the cottonseed only, composed principally of the kernel with such portion of the hull as is necessary in the manufacture of oil; provided that nothing shall be recognized as cottonseed cake that does not conform to the following definitions and that does not contain at least 36% of crude protein. Cottonseed cake shall be graded and classed as follows:

"F-9. — Per cent protein cottonseed cake, prime quality, cottonseed cake, prime quality, must be firm, but not flinty in texture, of sweet odor, free of mold, and when ground into meal must produce cottonseed meal, prime quality. It shall contain not less than 36% of crude protein. It must be designated and sold according to its protein content. Cottonseed cake with 43% of crude protein must be termed '43% protein cottonseed cake, prime quality,' and lower grades similarly designated.

"F-10. — Per cent protein cottonseed cake, off quality, cottonseed cake not fulfilling the above requirement as to color, odor and texture must be labeled '43% protein cottonseed cake, off quality,' and lower grades similarly designated.

"F-11. — Per cent protein nut-size cottonseed cake, — quality. Nut-size cottonseed cake shall be a product which will pass through 1½-inch round perforation and over ⅝-inch round perforation. It shall be free from meal, pea-size and pebble-size cake and shall not contain in excess of 10% of sheep-size cake.

"F-12. — Per cent protein sheep-size cottonseed cake, — quality. Sheep-size cottonseed cake shall be a product which will pass through ⅝-inch round perforation and over ⅝-inch round perforation. It shall be free from meal and pebble-size cake and shall not contain in excess of a total of 10% of nut-size and pea-size cake.

"F-13. — Per cent protein pea-size cottonseed cake, — quality. Pea-size cottonseed cake shall be a product which will pass through ⅝-inch round perforation and over ⅝-inch round perforation. It shall be free from meal, nut-size and pebble-size cake and shall not contain in excess of 10% of sheep-size cake.

"F-14. — Per cent protein pebble-size cottonseed cake, — quality. Pebble-size cottonseed cake shall be a product consisting of fine particles and small pieces of cottonseed cake capable of passing through a ⅝-inch round perforation.

"F-15. — Per cent protein cottonseed cubes or pellets, prime quality. Cottonseed cubes or pellets, prime quality, processed through a cubing or pelleting machine, must be firm, but not flinty, of sweet odor, free of mold, and when ground into meal, must produce cottonseed meal, prime quality. It shall contain not less than 36% of crude protein. It must be designated and sold according to its protein content."

It was decided to continue the investigation on peanut skins, to investigate the problem of citrus skins and pulp, peanut products, and imported oil cakes and meal, when sold as feed.

Considering dog feeds the executive com'tee reported "it has never been the policy of this ass'n to adopt quality standards for mixed feeds. This ass'n will study and adopt, if found desirable, a definition for the individual ingredients used in the manufacture of dog feeds, and the executive com'tee recommends that the investigator for dog feeds study this question and bring in next year such definitions of dog feed ingredients as in his judgment seem necessary."

The following definition was adopted as tentative:

— Per cent protein soybean oil cake or soybean oil chips is the product after the extraction of part of the oil by pressure or solvents from soybeans. If a name descriptive of the process of manufacture such as expeller, hydraulic, or solvent extracted be used, the product must correspond thereto.

Definition F-1 was deleted, and the following

was substituted for Resolution 13: "Resolved that any material sold primarily as a vitamin D supplement for poultry shall be labeled with a minimum guarantee of vitamin D potency expressed as A. O. A. C. chick units of vitamin D per gram, determined according to the tentative procedure adopted by the Ass'n of Official Agricultural Chemists, and assuming that one U.S.P. unit of vitamin D in the U. S. Pharmacopoeia 'Reference Cod Liver Oil' equals one A. O. A. C. chick unit."

The following oil supplement definitions were adopted as tentative:

Cod liver oil is the oil obtained from the livers of gadus morrhuae and/or other species of the family gadidae. It must contain not less than 600 U.S.P. units of vitamin A and not less than 85 A. O. A. C. chick units of vitamin D per gram.

Fortified cod liver oil is cod liver oil mixed with other suitable fish oils and/or fish oil concentrates so as to contain not less than 400 A. O. A. C. chick units of vitamin D per gram and shall be labeled with the minimum guarantee of vitamin A potency in terms of U.S.P. units of vitamin A per gram.

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Feed Prices

The following table shows the closing bid price each week for January futures of standard bran and gray shorts, spot cottonseed meal, soybean oil meal and alfalfa meal, in dollars per ton, and No. 2 yellow corn and No. 2 yellow soybeans in cents per bushel:

Minneapolis Spot		Kansas City	
Bran	Midds.	Bran	Shorts
Sept. 19.....	23.50	26.50	23.50
Oct. 17.....	26.00	31.00	25.20
Nov. 14.....	29.50	34.50	28.35
Nov. 21.....	31.50	35.50	28.60
Nov. 28.....	31.00	35.00	27.65
Dec. 5.....	31.50	33.00	29.50
Dec. 12.....	33.00	34.00	29.60
Dec. 19.....	32.50	33.00	30.40
St. Louis		Chicago Soy-	
Bran	Shorts	Beans	Meal
Sept. 19.....	25.00	27.50	1.19
Oct. 17.....	26.90	29.50	1.20¼
Nov. 14.....	29.90	32.25	1.26¼
Nov. 21.....	30.50	33.25	1.33¼
Nov. 28.....	29.70	32.75	1.34¼
Dec. 5.....	31.60	34.50	1.37¼
Dec. 12.....	31.55	34.75	1.44
Dec. 19.....	32.25	34.25	1.57
Cottonseed Meal		Denver	
Ft. Worth	Memphis	Alfalfa	Corn
Sept. 19.....	36.00	32.50	28.00
Oct. 17.....	35.00	29.50	28.00
Nov. 14.....	35.00	32.00	28.00
Nov. 21.....	36.00	33.00	28.00
Nov. 28.....	36.00	33.00	28.00
Dec. 5.....	36.00	33.50	28.00
Dec. 12.....	37.00	34.50	28.00
Dec. 19.....	38.00	34.50	28.00



Corn Gluten Feed, Corn Oil Cake Meal,
Brewers' Dried Grains Malt Sprouts
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Poultry Feeds and Feeding

Clinton, Ia.—At the Iowa State Poultry Show, Dec. 14-18, the Governor Herring trophy for the best poultry display was taken by the Pleasant Valley farm of Clarence. On exhibit at the show were over 2,000 birds.

Inadequate ventilation and smoky kerosene lamps may impair the health of baby chicks thru monoxide poisoning. This condition is believed to be the cause of much of the unexplained mortality among baby chicks, which may have been blamed on feed.

New York, N. Y.—The Peat Import Corp. has filed trade mark No. 382,928 for peat moss. A stenciled circle inclosing a representation of a plant and the word "moss" and a triangle at one side of the circle, inclosing the letters "PIC," constitutes the trade mark.

St. Paul, Minn.—T. J. Kelly, of Albert Lea, was elected pres. of the Minnesota Baby Chick Co-operative Ass'n at the organization's annual meeting here Dec. 4. P. A. Wielinski, Little Falls, was made vice-pres.; L. L. Baumgartner, Litchfield, sec'y-treas. Attempts will be made by ass'n members to bring the 1939 World Poultry Congress to the Twin Cities.

The malformed chicks occurring in hatchings of eggs from certain farms was found at the South Dakota State College to be due to the feeding of toxic grains produced on these farms, reports Kurt W. Franke and W. C. Tully. The theory was checked by feeding the toxic grains to breeding hens of known stock to make sure that no hereditary influences might be causing the malformations.

McMinnville, Ore.—The Oregon Poultry Service Club, an organization of feed manufacturers and retailers, elected officers at its annual meeting here Dec. 7. Homer Settlemeier, Milwaukie, was made pres.; R. W. Kreitz, Hillsboro, vice-pres.; W. G. Miksche, re-elected sec'y. Les Gray, Reedsville, and C. C. Ruth, Cornelius, were made directors. A lecture on "Nutritional Deficiencies in Poultry," by W. R. Ewing, was a feature of the meeting.

Washington, D. C., Dec. 19.—The size of the laying flocks of farm poultry is about three to four per cent larger than a year ago. The price of an average farm poultry ration in mid-November was \$1.76 a hundred pounds compared with \$1.15 in November last year. The average farm price of eggs this November was 32½ cents per dozen compared with 30 cents a year ago. Prices of chickens was 13.2 cents a pound compared with 15.9 cents a year ago—Buro of Agricultural Economics.

Feed accounts for about half the cost of carrying the laying flock, and of producing pullets. In the 37 flocks studied by the Illinois experiment station in 1934, an average of 3,162 pounds of farm-grown feed and 3,602 pounds of purchased feed was consumed for each 100 birds carried thru a full year. For each 100 young pullets brought up to a laying age, including the carrying of broilers, cockerels, and cull pullets, a total of 2,728 pounds of feed was used.

Washington, D. C.—Premier Peat Moss Corp., New York City, has been ordered by the Federal Trade Commission to discontinue a number of unfair competitive sales practices in promoting distribution of imported peat moss to wholesalers and retailers. The practices prohibited include misrepresentation of U. S. government statistics on the supply, demand, and quality of Premier's peat moss compared with competing peat moss; implication of government approval and analyses of Premier's peat moss, and others.

Washington, D. C.—Members of the government's interdepartmental com'te and of com'tes representing the feed and the poultry industries met here Dec. 18 to discuss plans for the 7th World's Poultry Congress and Exposition to be held in the U. S. in 1939.

Portland, Ore.—Leon S. Jackson, manager of the Oregon Feed Dealers Ass'n, has appealed to Oregon's Director of Agriculture, Solon T. White, for aid in supplying the poultry industry with corn, in view of the shortage of corn threatened by the maritime strike.

Penn Turkey Breeding Rations

A 3-year comparison of breeding turkeys, kept in confinement with access to a sun porch, compared with limited range, gave the range birds a slight advantage on egg hatchability. No material difference appeared between the experimental lots in the number of eggs laid, according to reports of D. R. Marble and P. H. Margolf at the Pennsylvania State College.

During the 1931 turkey breeding season a 20% protein mash, consisting of 155 lbs. yellow corn meal, 75 standard wheat bran, 70 wheat flour middlings, 60 fine ground heavy oats, 25 alfalfa meal, 70 meat scrap, 4 dried milk, and 5 salt, was kept before the birds and scratch grain was hopper fed in addition.

In the 1932 tests a 24% turkey starting mash was used. This was mixed from 120 lbs. yellow corn meal, 65 standard wheat bran, 60 wheat flour middlings, 50 finely ground heavy oats, 60 dried milk, 25 alfalfa meal, 55 meat scrap, 55 fish meal, 5 salt, 5 cod liver oil. Scratch grains, over which 1% of cod liver oil had been poured, were hopper fed in addition to the mash.

Confined groups were given fresh green feed daily. This was found to be essential, as 5% alfalfa meal in the mash was insufficient to meet the turkeys' requirements.

A Turkey Laying Ration

In a study on the egg laying abilities of breeding turkeys, S. J. Marsden, National Agricultural Research Center, Beltsville, Md., reported use of an all-mash turkey laying diet consisting of:

All Mash Turkey Laying Diet	
Bran	6.0 lbs.
Middlings (standard)	25.0 lbs.
Ground oats	20.0 lbs.
Ground yellow corn	30.0 lbs.
Alfalfa leaf meal	4.5 lbs.
Meat scrap (50% protein)	3.5 lbs.
Fish meal (Alaska herring 69% protein)	2.0 lbs.
Dried buttermilk	4.0 lbs.
Ground oyster shell	3.5 lbs.
Salt	0.5 lbs.
Cod liver oil	1.0 pt.

Total 100.0
Supplements: Water, gravel and alfalfa hay.

This ration apparently supplied sufficient protein for heavy egg production. Alfalfa hay was kept before the birds in racks during the winter and spring months.

The end of the normal laying season for breeding turkeys is considered to be May 31. Egg production started March 10.

Turkeys hatched between April 1 and June 28 will, if well fed and carefully managed, reach prime roasting condition in time to fill the normal fall and early winter (Oct. 1 to Dec. 31) market demand, and will enjoy the advantage of a natural growing season and green feed.

The experiment concluded that the egg laying habits of turkeys are very much like those of chickens, but total production of eggs is much lower. Average production in tests with young turkeys in 1930 was 55.8 eggs; with two-thirds young turkeys and one-third second year turkeys in 1931, 59.7 eggs.

Ground Oats Help Prevent Slipped Tendon

Using a basal ration made up of 25 parts dried skim milk, 1 part oyster shell, 1 part bone meal, 1 part salt, and 1 part cod liver oil, H. L. Wilke experimented with feeding single grains to White Leghorn chicks at the Iowa station.

He found that 72 parts of ground whole oats, mixed with 29 parts of this basal ration, produced entirely satisfactory growth and development in chicks kept in battery brooders, except that the shanks, skins, feet and beaks were devoid of pigment as was to be expected.

Using only ground wheat with the basal ration, in the same proportions, developed severe vitamin A deficiency. Ground yellow corn with the basal ration gave poor feathering and poor growth, tho it caused few cases of slipped tendon.

Supplementing the ration with either corn bran, yeast, or 10% ground oats did not prevent slipped tendons, but the addition of 20% of ground oats, or either 10 or 20% of rice bran proved active in preventing slipped tendon when added to a ration of corn plus the basal ration used.

Failure of the corn bran or yeast to protect against slipped tendon indicated that the beneficial effect of oats or rice bran could not be explained as due to either the increased fiber content, or increase in the vitamin B complex of the ration.

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Drouth Area Poultry Rations

Where the absence of home grown grains makes the purchase of whole grains as well as poultry concentrates necessary careful consideration must be given to the comparative costs of available feeds, yet all essentials for body maintenance and for egg production must be provided.

Even in the drouth areas where little or no local grain is available, one or more whole grains should be fed, says Iowa State College, supplemented by a 24% to 26% crude protein mash mixture, placed free choice before the birds. To each 100 pounds of "mash maker" containing so much protein the hens should eat about 300 pounds of grain. Bright green alfalfa hay and oyster shell or limestone should be kept available to the birds. Tested cod liver oil or sardine oil should be poured fresh over the grain just before feeding.

The following emergency laying mash mixtures are recommended by the college, when some grains are available and others are not:

Ingredients.	In use on college farm. (lbs.)	Supply of corn and oats (lbs.)	Supply of barley and wheat (lbs.)	Supply of oats and barley (lbs.)
Yellow corn meal...	36	35	..	..
Pulverized whole oats	20	35	35	25
Ground barley .....	..	..	35	25
Ground wheat or white shorts	14	..	..	20
Dried milk*	5	5	5	5
(A) Meat and bone-meal or fishmeal..	8	5	5	5
(B) Soybean meal or corn gluten meal	5	5	5	5
Alfalfa meal**	7	10	10	10
Bone meal	1	1	1	1
Ground oyster shell or limestone	3	3	3	3
Fine salt	1	1	1	1
Cod liver or sardine oil***	1	1	1½	1½

Note: Mixtures Nos. 3 and 4 should be fed as all mash rations. Whole oats and barley fed in too large quantities may cause gizzard impaction. Use plenty of gravel.

*Omit if 1 gallon of liquid milk is fed to 100 hens per day. Omit one-half to the feeds marked (A) and (B) if 2 to 3 gallons are fed per day to 100 hens.

**The alfalfa should be leafy and bright green in color to be rich in Vitamin A. Hens should have some green feed every day.

***Cod liver oil or sardine oil will supply needed vitamins A and D not provided in sufficient quantity by other feeds. Vitamin A loses strength when mixed with mash. All of it may be saved by mixing one-eighth to one-fourth pint of good oil on the grain (14 to 16 pounds) fed to 100 birds each day. Good layers need more vitamins than poor layers.

The morning and evening feeding of grain may consist of equal volume of two or more of the following grains: corn, oats, wheat and barley. Hens like corn and wheat and will relish oats or barley that have been soaked. Some poultrymen soak the grain for only 12 to 24 hours while others allow the grain to germinate.

The hens should have all the grain in the evening that they want if they have mash before them all day in adequate hopper space. The morning feed of grain should be one-fourth to one-half of the amount fed at evening.

Hopper feeding of grain is considered more sanitary than scattering it onto the litter. The feed needed for 100 hens per day is about 7 pounds of a 20% protein mash and 16 pounds of grain or 10 pounds of an 18% protein mash and 12 pounds of grain.

GOOD RATIOS FOR NORMAL FEED SUPPLIES

Mash No. 1

200 lbs. ground yellow corn (3½ bu.)
100 lbs. white shorts or 1½ bu. ground wheat.
100 lbs. bran or 3 bu. ground oats or 2 bu. ground barley.
*25 lbs. dried milk.
**100 lbs. 55% protein meat scraps or 60% protein tankage or fish meal.
5 lbs. fine salt.

530 lbs. Total.

Mash No. 2

140 lbs. ground yellow corn (3 bu.)
100 lbs. bran or 3 bu. ground oats or 2 bu. ground barley.
100 lbs. flour middlings or 1½ bu. ground wheat.
*25 lbs. dried milk.
**150 lbs. soybean oil meal.
20 lbs. steamed bone meal.
5 lbs. fine salt.

540 lbs. Total.

*Omit if 1 gallon of liquid milk is fed to 100 hens per day.

**To be reduced to 75 pounds if 2 gallons of milk are available per day and to 50 pounds if 3 gallons are fed to 100 hens per day.

Add 1½% to cod liver oil or sardine oil during winter. First mix it with bran or ground corn and then mix with other ingredients.

Grain

448 lbs. yellow corn (8 bu.)
332 lbs. heavy oats (10 bu.)
300 lbs. wheat (5 bu.)

1,080 lbs.

Vitamer Measuring of Vitamin A

The Hilger vitamer is described by F. W. Irish in a recent issue of the Journal of the Association of Official Agricultural Chemists. This device is a modified spectrophotometer, designed to measure the amount of absorption of ultraviolet light of the wave length of 3,280 a. u.

The amount of absorption at this wave length has been used to measure the potency of vitamin A concentrates. To check the procedure and calculations proposed by the maker of the instrument 8 collaborators determined the units of vitamin A in 5 samples of cod-liver oil of known potency, following carefully the specified manipulations and calculations.


When the results obtained by the collaborators individually were checked against each other and against the U. S. Pharmacopoeia reference on cod-liver oil they were found to deviate considerably from the average for each of the oils, and varied too much from each other to warrant use of the device as an official method for determining the vitamin A potency of a feed.

H. R. Guilbert, University of California, believes the vitamer is a usable scientific instrument for estimating the vitamin A value of a feed. With reference to earlier efforts in the use of this device he says, "The only dif-

ference in the procedure we use now is that we specify aldehyde-free alcohol and peroxide-free ether in the extraction. The dye solution should be standardized against beta carotene, melting point, 184 degrees C. For determining vitamin A in liver oils and concentrates, we have been using a Hilger vitamer. For most purposes it seems to be quite satisfactory."

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Dairy Calves Live on Soy Bean Milk

Four pairs of dairy calves compared soybean milk with cow's milk in an experiment recently reported by L. Shoptaw in the Journal of Dairy Science.

The calves fed soybean milk made slightly smaller increases in weight and height, and ate more grain and less alfalfa hay, both fed free choice, than did the calves on cow's milk. The calves on cow's milk enjoyed a more thrifty appearance and better health than the soy bean milk fed calves, all of which objected strenuously before they could be induced to drink the soybean milk.

Artificial Drying Preserves Vitamin in Alfalfa

Samples of commercial dehydrated alfalfa meal were found to be 85% as potent in the growth promoting vitamin G as dried skim milk, and 40% more potent in this factor than sun-cured alfalfa meal, in studies by Wilgus, Norris and Heuser, at Cornell University.

It was believed that some of the difference favoring dehydrated alfalfa meal over sun-cured meal was due to use of less mature alfalfa plants as the source of the meal. Dehydrated meal tended to run higher in grade, protein and ether extract than sun-cured meal, supporting this theory. However, considerable variation was found in both types of meals.

Help the High Producing Cows by Grinding Feed

Textbooks in general have advocated the grinding of grains for most classes of livestock. In studying the value of grinding grains for dairy cows, Wilbur of the Indiana Station found that medium finely ground corn and oats were superior for milk production to the same grains when fed whole, coarsely ground, or pulverized. The cows produced 11.2% less milk when fed whole grain, 5.8% less milk when fed coarsely ground grain, and 5.4% less milk when fed pulverized grain, than when fed a similar mixture containing medium ground grain.

At the Texas station as reported in Bulletin 530 recently, experiments were conducted with dairy cows to compare the value of whole versus ground corn, whole versus ground oats, whole versus ground milo, and whole versus ground barley for milk production.

In all experiments there was a greater consumption of concentrates by both groups of cows during the periods they were on ground grains. This difference in consumption was probably due to the fact that the ground grains were more palatable than the whole grains.

Greater milk production was obtained during the periods of ground grain feeding.

When the results of whole versus ground grain feeding were analyzed on the basis of productive energy, considering the results of milk production and feed consumption, it was found that with the exception of barley the greater amount of milk produced during the period of ground grain feeding was probably due to greater consumption of concentrates.

The results of this series of experiments indicate that ground grain when mixed with other concentrates is more palatable than the same grain unground in a similar mixture of concentrates, and in these experiments the cows ate more of the concentrate ration containing the ground grain. This indicates that the greater palatability of the ground grains has a great influence upon the results of feed consumption and milk production in these experiments.

The analysis of the results of feed consumption and milk production indicate that it is more profitable to grind feed for high producing cows than for low producing cows.

The amount of whole grain masticated by the cows in these experiments was influenced

more by the individuality of the cows than by the kind of whole grain fed. However, the cows in these experiments masticated a greater per cent of the whole corn than of the whole milo. Unmasticated grain yielded very little if any energy while passing thru the digestive tract of the cows.

Soybeans Rich in Vitamin A

A ration containing 40% of Illini soybeans provides sufficient, or very nearly sufficient, vitamin A for maximum growth of the rat. This may be compared with a percentage of 4.5 to 5% of butterfat, previously found to be sufficient for maximum growth. In other words, soybeans appear to contain about one-tenth as much vitamin-A potency as butter. While it is evident that soybeans also contain a smaller concentration of vitamin A than corn, no quantitative statement on this point can be made at present.

Twenty per cent of soybeans seems to provide enough vitamin B while for corn 35 to 40% has previously been shown to be necessary. Thus soybeans would seem to carry about twice the vitamin-B potency of corn.

Twenty to 30% of soybeans in the diet seems as effective as 70% or possibly more of corn as a provider of vitamin G, indicating that soybeans contain two or three times as much of this vitamin as does corn.—Illinois Experiment Station.

Vitamin D Isolated

Marked progress toward isolation of natural vitamin D, was reported to the meeting of the American Dietetic Ass'n at Boston, by Professor John W. M. Bunker, of the Massachusetts Institute of Technology. The work was done with the aid of short-wave radio.

This vitamin, best known for its ability to prevent and cure rickets, has been recognized for 15 years but it has not been possible to obtain it in a state free of contaminating and associated substances.

Working with Dr. Nicholas A. Miles, Dr. Bunker has been able to purify and concentrate a fish oil with the exceptionally high potency of ten million units per gram. Ordinary cod liver oil, the most familiar source of the vitamin, has only two hundred and fifty units per gram, while even the best known commercial grades have only eight hundred and fifty units per gram.

Reporting attempts at the synthetic production of an antirachitic substance, Dr. Bunker stated that he and his associates have prepared a potent vitamin of this type, utilizing the electromagnetic force of a short-wave radio to activate irradiated ergosterol, a less concentrated form of the vitamin.

From experiments with this and other derivatives, Dr. Bunker has concluded that there may be a multiplicity of antirachitic substances, each different from the other. These would include, he said, the natural vitamin D of fish liver oil; substances of the irradiated ergosterol type; irradiated cholesterol, and a fatty acid fraction of milk.

Other rickets-preventing factors in the diet, Dr. Bunker said, include the relation of phosphorus to calcium, and casein. Casein protects against rickets when it is the only protein in a diet which by all classical criteria should result in rickets. This holds good even when the imbalance between calcium and phosphorus is as great as eight to one and despite the use of the most rigorous purified casein obtainable.

The Associated Southwest Country Elevators, Kansas City, has nine local committees in nine middle and southwestern states working on the problem of regulating the irresponsible trucker merchant who lives by his wits, frequently at the expense of the people with whom he does business. Each committee is made up of representatives of the grain, feed, coal, fruits and produce business.

Animals Need More Iron Than Copper

A number of animal feeds contain a slightly inadequate concentration of iron, particularly the cereal grains and timothy hay. However, the grinding of grain will raise its iron content considerably by contamination from the iron parts of the mill. Thus while a sample of whole wheat contained .0034% of iron, after the grain was ground in various mills the percentage of iron was materially increased. The minimum increase was to .0043% and the maximum to .005.

In a list of 50 copper analyses of animal feeds only two contain less than .00024% of this metal. They are wheat straw and timothy. It seems unlikely that well-balanced animal rations would ever be deficient in copper, altho in Florida, where the soil in certain areas is deficient in copper, an anemic condition in cattle caused by copper deficiency has been reported.

New Feed Trade Marks

The Wm. Schluderg-T. J. Kurdle Co., Baltimore, Md., has filed trade mark No. 384,101, "Bal-Mar" for dog food.

Casein Co. of America, Inc., New York, N. Y., has filed trade mark No. 383,257, "Certora," for dry skimmed milk.

Robert C. Graham, doing business as Graham Farms, Washington, Ind., has filed trade mark No. 381,127, "Tru-Friend" for dog food.

Max Lazarus & Sons, Inc., Baltimore, Md., has filed trade mark No. 382,598, "Happy Dog" in shaded lettering, for canned dog and cat food.

Clarence F. Gaines, doing business as The Gaines Food Co., Sherburne, N. Y., has filed trade mark No. 379,839, "Gaines Krunch-on" for dog food.

The Foster Canning Co., Inc., Glendale, N. Y., has filed trade mark No. 383,997, "Clipper," in script lettering, for canned food for dogs, cats, and other carnivorous animals.

The Keefe Packing Co., Arkansas City, Kan., has filed trade mark No. 384,331, "Black and White," the first two words in black faced type, the last in outline lettering, for dog food.

Illinois Meat Co., doing business as Sterling Packing Co., Chicago, Ill., has filed trade mark No. 382,595, the word "Brutus" for canned food for dogs, cats, and other carnivorous animals.

Allied Mills, Inc., Chicago, Ill., have filed trade mark No. 383,711, for dog food. It is a picture of six different breeds of dogs, all bibbed, and gathered hungrily behind a food laden table.

U. S. Industrial Alcohol Co., New York, N. Y., has filed trade mark No. 383,276, "Vacatone" in script, for dried fermented molasses yeast product, used as a poultry and livestock feed supplement.

Albert Angell, doing business as Glenayre Feeds, Burlington, Wis., has filed trade mark No. 382,259, a representation of a farm yard and home, across which are the words "Glenayre Feeds" in script, for poultry feeds.

Worcester Salt Co., New York, N. Y., has filed trade mark No. 382,503, a representation of an end view of a block of salt, bearing the large square, indented letter "S," and smaller indented letters, "W" and "C," for salt blocks for live stock.

Albert Angell, doing business as Glenayre Feeds, Burlington, Wis., has filed trade mark No. 381,744 for dog foods. A very large black cat, its back humped, and a viciously barking little black and white dog, constitutes the trade mark for "Spunk Dog Ration."

Cottonseed and Linseed Meals Compare Favorably

Cottonseed and linseed meals compared favorably with each other in a test with 12 heifer and 12 steer calves fed by the reversal method at the Michigan agricultural experiment station to determine the comparable palatability of 43% protein cottonseed meal and 37% protein linseed meal. All animals were given the same basal ration, fed twice daily in individual stalls.

Feed consumption indicated no preference for either protein supplement on the part of either the heifers or the steers. Average daily gains and the amount of feed required per 100 lbs. of gain were also approximately the same.

Iodine in Feeds

Professors G. S. Fraps and F. D. Fuller state that the need of iodine in Texas feeds and supplementary to human foods is being studied. Analyses of feeds, foods, soils and waters for iodine content are being made. Methods of estimating iodine content have been given considerable study.

The quantity of iodine present has been found to be small and it is difficult to secure concordant results when the same sample is analyzed at different times.

Pending a final report on the study being made their opinion is: "Supplementary additions of iodine do not appear to be needed in Texas feeds or foods."

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Reducing Weights to Bushels of 48 Pounds for Barley, Buckwheat and Hungarian Grass Seed

Weight (Lbs.)	48 lbs. Bushel	56 lbs. Bushel	60 lbs. Bushel	70 lbs. Bushel
6,600	137.5	125.0	110.0	94.3
6,700	139.6	126.8	111.8	95.8
6,800	141.7	128.6	113.6	97.3
6,900	143.8	130.4	115.4	98.8
7,000	145.8	132.1	117.2	100.0
7,100	147.9	133.9	119.0	101.6
7,200	149.9	135.7	120.8	103.1
7,300	152.0	137.5	122.6	104.6
7,400	154.0	139.3	124.4	106.2
7,500	156.1	141.1	126.2	107.7
7,600	158.1	142.9	128.0	109.3
7,700	160.2	144.7	129.8	110.8
7,800	162.2	146.5	131.6	112.4
7,900	164.3	148.3	133.4	113.9
8,000	166.3	150.0	135.2	115.4
8,100	168.4	151.8	137.0	117.0
8,200	170.4	153.6	138.8	118.5
8,300	172.5	155.4	140.6	120.1
8,400	174.5	157.2	142.4	121.6
8,500	176.6	159.0	144.2	123.2
8,600	178.6	160.8	146.0	124.7
8,700	180.7	162.6	147.8	126.3
8,800	182.7	164.4	149.6	127.8
8,900	184.8	166.2	151.4	129.4
9,000	186.8	168.0	153.2	130.9
9,100	188.9	169.8	155.0	132.5
9,200	190.9	171.6	156.8	134.0
9,300	193.0	173.4	158.6	135.6
9,400	195.0	175.2	160.4	137.1
9,500	197.1	177.0	162.2	138.7
9,600	199.1	178.8	164.0	140.2
9,700	201.2	180.6	165.8	141.8
9,800	203.2	182.4	167.6	143.3
9,900	205.3	184.2	169.4	144.9
10,000	207.3	186.0	171.2	146.4
10,100	209.4	187.8	173.0	148.0
10,200	211.4	189.6	174.8	149.5
10,300	213.5	191.4	176.6	151.1
10,400	215.5	193.2	178.4	152.6
10,500	217.6	195.0	180.2	154.2
10,600	219.6	196.8	182.0	155.7
10,700	221.7	198.6	183.8	157.3
10,800	223.7	200.4	185.6	158.8
10,900	225.8	202.2	187.4	160.4
11,000	227.8	204.0	189.2	161.9
11,100	229.9	205.8	191.0	163.5
11,200	231.9	207.6	192.8	165.0
11,300	234.0	209.4	194.6	166.6
11,400	236.0	211.2	196.4	168.1
11,500	238.1	213.0	198.2	169.7
11,600	240.1	214.8	200.0	171.2
11,700	242.2	216.6	201.8	172.8
11,800	244.2	218.4	203.6	174.3
11,900	246.3	220.2	205.4	175.9
12,000	248.3	222.0	207.2	177.4
12,100	250.4	223.8	209.0	179.0
12,200	252.4	225.6	210.8	180.5
12,300	254.5	227.4	212.6	182.1
12,400	256.5	229.2	214.4	183.6
12,500	258.6	231.0	216.2	185.2
12,600	260.6	232.8	218.0	186.7
12,700	262.7	234.6	219.8	188.3
12,800	264.7	236.4	221.6	189.8
12,900	266.8	238.2	223.4	191.4
13,000	268.8	240.0	225.2	192.9
13,100	270.9	241.8	227.0	194.5
13,200	272.9	243.6	228.8	196.0
13,300	275.0	245.4	230.6	197.6
13,400	277.0	247.2	232.4	199.1
13,500	279.1	249.0	234.2	200.7
13,600	281.1	250.8	236.0	202.2
13,700	283.2	252.6	237.8	203.8
13,800	285.2	254.4	239.6	205.3
13,900	287.3	256.2	241.4	206.9
14,000	289.3	258.0	243.2	208.4
14,100	291.4	259.8	245.0	210.0
14,200	293.4	261.6	246.8	211.5
14,300	295.5	263.4	248.6	213.1
14,400	297.5	265.2	250.4	214.6
14,500	299.6	267.0	252.2	216.2
14,600	301.6	268.8	254.0	217.7
14,700	303.7	270.6	255.8	219.3
14,800	305.7	272.4	257.6	220.8
14,900	307.8	274.2	259.4	222.4
15,000	309.8	276.0	261.2	223.9
15,100	311.9	277.8	263.0	225.5
15,200	313.9	279.6	264.8	227.0
15,300	316.0	281.4	266.6	228.6
15,400	318.0	283.2	268.4	230.1
15,500	320.1	285.0	270.2	231.7
15,600	322.1	286.8	272.0	233.2
15,700	324.2	288.6	273.8	234.8
15,800	326.2	290.4	275.6	236.3
15,900	328.3	292.2	277.4	237.9
16,000	330.3	294.0	279.2	239.4
16,100	332.4	295.8	281.0	241.0
16,200	334.4	297.6	282.8	242.5
16,300	336.5	299.4	284.6	244.1
16,400	338.5	301.2	286.4	245.6
16,500	340.6	303.0	288.2	247.2
16,600	342.6	304.8	290.0	248.7
16,700	344.7	306.6	291.8	250.3
16,800	346.7	308.4	293.6	251.8
16,900	348.8	310.2	295.4	253.4
17,000	350.8	312.0	297.2	254.9
17,100	352.9	313.8	299.0	256.5
17,200	354.9	315.6	300.8	258.0
17,300	357.0	317.4	302.6	259.6
17,400	359.0	319.2	304.4	261.1
17,500	361.1	321.0	306.2	262.7

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